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ANECDOTES OF THE MEDICAL WORLD

AND

CURIOSITIES OF MEDICINE

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DOCTORS AND PATIENTS

OR

ANECDOTES OF THE MEDICAL WORLD
AND CURIOSITIES OF MEDICINE

BY

JOHN TIMBS, F.S.A.

AUTHOR OF

'LIVES OF WITS AND HUMOURISTS' 'A CENTURY OF ANECDOTE' ETC.

IN TWO VOLUMES—VOL. II.

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DOCTORS *and* PATIENTS.

The Discovery of Vaccination by Dr. Jenner.

It would be difficult to select from the long list of benefactors to human nature, an individual who has contributed so largely to the preservation of life and the alleviation of suffering, as Edward Jenner, the discoverer of Vaccination.

The ravages of the small-pox might fairly be termed the scourge of mankind, and an enemy more extensive and more insidious in its warfare than even the plague. A family blighted in its various hopes, through this terrible visitation, was an everyday spectacle: the imperial house of Austria lost eleven of its offspring by the small-pox in fifty years alone; the grandfather of Maria Theresa died of it.

The fearful fact can, however, be traced half a century before Jenner's time. In the Journal of John Byron, F.R.S., under date June 3, 1725, it is recorded that, 'at a meeting of the Royal Society, Sir Isaac Newton presiding, Dr. Jurin read a case of small-pox, where a girl who had been inoculated and had been vaccinated, on trial, and had them not again; but another [a] boy, caught the small-pox from this girl, and had the confluent kind, and died.' This case occurred at Hanover. The inoculation of the girl seemed to have failed entirely: it was objected that she had not taken the true small-pox; doubts, however, were removed, on a boy, who daily saw the girl, and died, 'having had a very bad small-pox of the confluent sort.' This is the first use of the word *vaccination*, or mere

familiarly cow-pox, which is an eruption arising from the insertion into the system of matter obtained from the eruption on the teats and udders of cows, and especially in Gloucestershire; it is also frequently denominated *vaccine matter*, and the whole affair, inoculation and its consequences, is called *vaccination*, from the Latin *vacca*, a cow.

It is admitted that Jenner's success lay in the scientific application of his knowledge of the fact, that the chapped hands of milkers of cows sometimes proved a preventive of small-pox, and from those of them whom he endeavoured to inoculate resisting the infection. These results were, probably, far beyond Jenner's range, and long before his time; for we have testimony of their having been observed by a Cheshire gentleman, at Prestbury, in or about 1740. This does not in the least detract from Jenner's merit, but shows that to his genius for observation, analogy, and experiment, we are indebted for this application of a simple fact, only incidentally remarked by others, but by Jenner, rendered the stepping-stone to his great discovery—or, in other words, extending its benefits from a single parish in Gloucestershire to the whole world.

While sowing, the disease of small-pox was prevalent in some countries; selling and buying, it was adopted in others, when children bartered fruit in change for the infection. It does not appear that the faculty took any notice of inoculation until the year 1703, when the success of the practice was noticed in Turkey. Lady Mary Wortley Montagu pursued the enquiry in her voyage to that country, by causing her son Edward to be inoculated by the surgeon to the embassy, and on her return to England in 1722, had the operation tried with successful results on her daughter; and her ladyship was allowed to have it tried, for the first time in England, on seven condemned criminals, 7 George I. 1728. Still, although two of the princesses of the Royal family had been inoculated with equal benefit, inoculation was furiously opposed by the profession, and even from the pulpit; and so successful was the opposition that it was brought into disuse both in England and throughout Europe, many cases of a confluent character having made their ap-

pearance after inoculation, and in 1740 the practice had nearly fallen into disuse. In this virulent controversy, a singular circumstance was observed : while regular practitioners stated the practice to be unsuccessful, whenever it was adopted by quacks, monks, and old women, the result was invariably favourable, and the report that reached Europe of a Carmelite friar having inoculated thousands of Indians, an old woman being equally fortunate in Greece, while a planter in St. Christopher's inoculated three hundred persons without the loss of a single patient. The practice was again resumed, chiefly in our sea-ports, and gradually extended over the country. Dr. Mead materially assisted its progress by stating that the Circassian ladies chiefly owed their beauties to this salutary preventive. In the year 1763, Daniel Sutton, son of a surgeon in Suffolk, recommended the practice, modified, however, in the treatment of the malady, and brought inoculation into general repute. Dr. Dimsdale, of London, inoculated Catherine II., Empress of Russia, in 1798; for whose attendance at St. Petersburg, she presented him with 10,000*l.*; settled upon him an annual pension of 500*l.* to be paid in England, and created him a baron of the Russian empire, where small-pox is said to have swept away 2,000,000 in a single year.

Woodville on Small-pox.

Jenner was the third son of the Vicar of Berkeley, in Gloucestershire, where he was born May 17, 1749. Before he was nine years of age, he showed a growing taste for natural history; and when at school at Cirencester he was fond of searching for fossils, which abound in that neighbourhood. He was apprenticed to a surgeon at Sudbury, near Bristol, and at the end of his apprenticeship came to London and studied under John Hunter, with whom he resided as pupil for two years. In 1773, he returned to his native village, and practised as a surgeon and apothecary; and in 1792 he obtained the degree of M.D. at St. Andrew's University.

Strange to say, it was only in 1727 that inoculation became general in France; and its adoption was materially forwarded by Voltaire, who also took special care to acquaint

the fair sex that it was to this practice the Circassian and Georgian odalisques owed their beauty.

Jenner's discovery of vaccination originated as follows:—While an apprentice at Sudbury, he one day heard a country-woman say that she could not take the small-pox because she had had cow-pox; and he then learnt that it was a popular notion in that district, that milkers who had been infected with a peculiar eruption which sometimes occurred on the udder of the cow, were completely secure against the small-pox. The medical gentlemen of the district told Jenner that the security which it gave was not perfect; and Sir George Baker, the physician, treated it as a popular error. But Jenner thought otherwise, and, although John Hunter and other eminent surgeons disregarded the subject, Jenner pursued it. He found at Berkeley, that some persons to whom it was impossible to give small-pox by inoculation, had had cow-pox; but that others who had had cow-pox, yet received small-pox. This led to the doctor's discovery, that the cow was subject to a certain eruption which had the power of guarding from small-pox; and next, that it might be possible to propagate the cow-pox, and with it security from the small-pox, first from the cow to the human body, and thence from one person to another. For a long time, however, Jenner's experiments were disregarded: Hunter, Cline, and other surgeons would not assist him, and it was not until May 14, 1796 (a day still commemorated by the annual festival at Berlin), that a boy, aged eight years, was vaccinated with matter from the hands of a milkmaid; the experiment succeeded, and he was inoculated for small-pox on July 1 following, without the least effect. In 1796, a friend of Jenner's, to whom he had communicated the results of his enquiry—Mr. Cline, surgeon to St. Thomas's Hospital—first employed vaccination in London; and the practice was speedily adopted in the army and navy, the Government bestowing on Jenner honours and rewards, and the University of Oxford conferring on him the diploma of Doctor of Medicine. Blackmore and Tanner had vehemently opposed inoculation, so did many members of the faculty; foremost among them Moseley, Birch, and Woodville, opposed the new system of vaccination. Persons

were even asked and induced to believe that if they submitted to vaccination, they were in jeopardy of being converted into dogs. A child was said to have never ceased, since he received the matter into his system, to run about on all fours, and imitate the lowing of a bull! In a caricature Jenner was mounted on a cow, with these lines :—

O Jenner! thy book, nightly phantasies rousing,
Full oft makes me quake for my heart's dearest treasure;
For fancy, in dreams, oft presents them all browsing
On commons, just like little Nebuchadnezzar.

There, nibbling at thistle, stand Jem, Joe, and Mary,
On their foreheads, oh, horrible! crumpled horns bud;
There Tom with his tail, and poor William all hairy,
Reclined in a corner, are chewing the cud.

Jenner then extended his experiments, and in 1798 published his first work on the subject. Yet the method met with much opposition, until, in the following year, when upwards of seventy of the principal London physicians and surgeons declared their confidence in the cure, the practice of which began to supersede the old plan pursued by the Small-pox Hospital, which had been founded for inoculation. The two systems were each pursued until 1808, when the Hospital governors discontinued small-pox. Meanwhile, the Royal Jennerian Institution had been formed: in 1809, the Government establishment was instituted, and from thence to 1820 Vaccination became the recognised method throughout all Europe.

A Committee of Parliament was now appointed to consider the claims of Jenner upon the gratitude of his country; it being clearly proved that he had converted into scientific demonstration a tradition of the peasantry. Two parliamentary grants of 10,000*l.* and 20,000*l.* were voted to him. In 1808, the National Vaccine Establishment was formed by Government, and placed under his direction. Honours were profusely showered upon him by various foreign princes, as well as by the principal learned bodies of Europe. Till the last day of his life, in February 1828, Jenner was occupied in diffusing the advantages of his discovery both at home and abroad; and he had the satisfaction of knowing that vaccination had even then shed

its blessings over every civilised nation of the world, prolonging life, and preventing the ravages of the most terrible scourge to which the human race was subject.

The remains of Dr. Jenner were laid in the chancel of Berkeley Church. A marble statue of him, by Sevier, has been erected to his memory in the nave of Gloucester Cathedral; and another statue of Jenner has been placed in a public building at Cheltenham; and five medals of him have been struck—three by the German nation, one by the surgeons of the British Navy, and the fifth by the London Medical Society.

In London, a subscription was raised for the erection of a statue of Jenner in bronze; but nearly half the amount (340*l.*) was collected by the Philadelphia Committee; to the English funds 25*l.* was contributed by the Prince Consort. This statue was inaugurated in Trafalgar Square, May 17, 1858, the 109th anniversary of Dr. Jenner's birth. The statue was modelled by Calder Marshall, R.A.; the doctor wears his university gown, and is seated in a classic chair, which is ornamented with the wand of Æsculapius. The pedestal is of grey granite, and is simply inscribed 'JENNER.'

This statue has been removed to the bank of the Serpentine, in Hyde Park. It was erected by public subscription, which originated in England; but as Jenner was a benefactor to the world, the tribute to his memory was very properly taken up by other countries besides his own. When the project was first mooted, aid was solicited from the United States; and in the 'American Medico-Chirurgical Review' it is stated 'That the appeal was so much more cordially responded to in this country (America) than in the one in which the movement originated, that it may be truly said, the Jenner monument in London is essentially an American tribute, which the English people have assisted in paying to an English celebrity.'

This is not very creditable to English feeling, but it shows that, had not the erection of Jenner's statue been made a world-wide proposition, the memory of the discoverer of Vaccination would to this day have remained without a fitting memorial in his native country.

To conclude, it is to be regretted that Jenner, at whose

intercession the magic of his name obtained the liberation of Napoleon's prisoners, could not obtain an appointment for the members of his own family from the British Government; nay, the College of Physicians, despite the exertions of Dr. Baillie, refused to admit him to a fellowship in their learned body. It was, when reflecting on such national gratitude, that he wrote to a friend: 'Never aim, my friend, at being a public character if you love domestic peace.' And not long before his death, he said: 'I am not surprised that men are not thankful to me; but I wonder that they are not grateful to God for the good which he has made me the instrument of conveying to my fellow-creatures.'

Violent were the outcries made against the discovery of Jenner in the last century, and they are repeated to this day by the 'peculiar people,' who, under the influence of great fanaticism, suffer fines and imprisonment rather than submit to the laws which, in the interest of the individual as well as of the community, makes vaccination compulsory.

SONG IN PRAISE OF TOBACCO. 1660.

To feed on flesh is gluttony.
It maketh men fat like swine;
But is not he a frugal man
That on a loaf can dine?

He needs no linen for to fowl
His fingers' ends to wipe,
That has his kitchen in a box,
And roast meat in a pipe.

The cause wherefore few rich men's sons
Proved disputants in schools,
Is that their fathers fed on flesh,
And they begat fat fools.

This fulsome feeding clogs the brain
And doth the stomach choake,
But he's a brave spark that can dine
With one light dish of smoke.

Smoking for the Plague.

Thomas Hearne, in his Diary, writes: '1720–21, January 2.—I have been told that in the last great Plague at London, none that kept tobacconists' shops had the plague. It is certain that smoking was looked upon as a most excellent preservative, insomuch that even children were obliged to smoke. And I remember that I heard formerly Tom Rogers, who was yeoman-beadle, say, that when he was that year, when the plague raged, a school boy at Eton, all the boys of that school were obliged to smoke in the school every morning, and that he was never whipped so much in his life as he was one morning for not smoking.'

Cure for Epilepsy.

For the cure of Epilepsy, or the falling sickness, numerous have been the charms which have been invented, and marvellously mystical withal. A common remedy among the lower orders about London, and especially in Essex, is to cut the top of a black cat's tail, in order to procure *three* drops of blood, which are to be taken in a spoonful of milk, drawn from the female breast; and this is to be repeated *three* successive days. If the patient be a male, the woman from whom the milk is to be taken must have lain in of a girl; and of a boy, if the patient be a female; but if the patient be apprised of the period when this precious potion was compounded, it will assuredly lose its efficacy. Dr. Lettsom met with three instances within a fortnight, where this plan had been strongly recommended. For a similar effect the patient is to creep, head-foremost, down *three* pair of stairs, *three* times a-day, for *three* successive days. Let us remember that *three* is the root of the mystic number *nine*, and that it is still depended upon by Freemasons.

Sir Thomas Browne ('Vulgar Errors,' book ii. chap. 6) discourses of the virtues of mistletoe in 'epileptical intentions. Country practice hath added another, to provoke the afterbirth, and in that case the decoction is given unto cows. That the berries are poison, as some conceive, we are so far from averring, that we have safely given them inwardly, and can

confirm the experiment of Brassavolus, that they have some purgative quality.'

Sir John Colbach, in his dissertation concerning mistletoe, 1720, strongly recommends it as a medicine for epilepsy and all other convulsive disorders: adding, that this beautiful plant must have been designed by the Almighty 'for further and more noble purposes than barely to feed thrushes, or to be hung up superstitiously in houses to drive away evil spirits.' He refers the veneration in which the Druids were held to the cures they performed by means of the mistletoe of the oak, 'this tree being sacred to them, but none so that had not the mistletoe upon them.' But Sir John endeavours to show the mistletoe of the crab, the lime, the pear, or any other tree, to be of equal virtue.

Remedy for Yellow Fever.

Mr. P. W. Nicholl, of Jersey, having seen the accounts in the papers of the fearful ravages of the yellow fever at Bermuda, writes as follows:—'I have a French work stating that the common nettle (*urtica diœcia*), dried and reduced to powder, and used as a condiment for preparing food, is a preserver against this fearful malady. It is made into a liqueur and syrup in France, and is preferable to absinthe. I have succeeded in bringing this useful but despised plant into general use here with great benefit, as acknowledged by several medical men, both here and in London. To preserve it it should be put in bottles, or any package which preserves it from damp and mildew. By its use a man can be his own doctor, and if living in the country, without any expense.

It is a singular fact, that steel dipped in the juice of the nettle becomes flexible. Dr. Thornton, who made the medical properties of our wild plants his peculiar study, states that lint dipped in nettle juice, and put up the nostril, has been known to stay the bleeding of the nose, when all other remedies had failed; and adds, that fourteen or fifteen of the seeds ground into powder, and taken daily, will cure the swelling in the neck known by the name of *goître*, without in any way injuring the general habit.

Cause of Hay Fever.

Coumarin is an interesting and widely diffused natural perfume contained in the Tonka or Tonga bean, formerly well known in this country, and much employed for perfuming snuff. But the interesting circumstance in the history of this substance is, that, though discovered first in a bean, the produce of a warm climate, it has since been found to exist in, and to impart its well known agreeable odour to several of our most common European plants. Among these, the sweet-scented vernal grass, to which we are in the habit of ascribing the fragrance of well-made hay, deserves especial mention. This grass contains coumarin, and imparts to dry hay the odour of this substance. The influence which, in the form of vapour, coumarin exercises upon the brain, is very powerful; and it is not improbable that the *hay fever*, to which many susceptible are liable, may be owing to presence of coumarin in the air, in unusual quantity, during the period of hay-making. In seasons which are peculiarly hot, and in localities where the odoriferous grasses occur in uncommon plenty, such an abundance of coumarin vapour in the air is, by no means, unlikely to occur.

Hay Tea.

Hay tea has long been given to the cows in Feroe. In England, some fifty years since, it was regarded as a new discovery. It seems to have been long in use in other countries. A century ago, the Dublin Society printed instructions for rearing calves with a portion of this food, according, as they say, to the method practised in divers countries.

The peculiar smell of new hay, says Sir J. E. Smith, the botanist, proceeds from the whole herbage, and seems to escape from the orifices of its containing cells only when the surrounding vessels, by growing less turbid, withdraw their pressure from such orifices. When this smell of new hay is vehement, it becomes like the flavour of bitter almonds.

POISONINGS.

Poisons of the Ancients.

Sir Henry Halford, in one of those delightful papers in which he was wont, as Mr. Pettigrew has gracefully said, to 'display the elegant scholar and observant physician,' has left us the following curious investigations in the death of celebrated characters of antiquity, with special reference to the knowledge of poisons possessed by the ancients :—

Sylla died in consequence of the rupture of an internal abscess, through an excess of rage ; which, according to Valerius Maximus, produced a violent vomiting of blood, and death.

Crassus, the eminent lawyer and friend of Cicero, died of pleurisy ; and the course of treatment for this disorder, prescribed by Celsus, and in use at the time—namely, bleeding, cupping, and blistering—was so similar to that pursued at the present day that nothing was probably left undone that could have saved his valuable life.

Pomponius Atticus, whom Cicero loved as a brother, and who was on friendly terms with all parties in the disturbed times in which he lived, was said to have died of a fistula in the loins; it was probably, Sir Henry thinks, a dysentery ending, as that disorder commonly does, in an affection of the lower bowels. He had recourse to starvation, a very common expedient amongst the Romans, and died in ten days, aged seventy-seven.

The latter end of Socrates was brought about by the common mode of despatching persons capitally convicted at Athens, namely, by a narcotic poison; but neither Xenophon nor Plutarch tells us the species of poison. The poisons of this

class known to the ancients, were aconite, white poppy, hyoscyamus, and hemlock. The black poppy might be the Theban drug. The hyoscyamus was used at Constantinople, and was very likely the Nepenthe spoken of by Homer. But most probably the poison administered to Socrates was the same as that given to other condemned criminals, namely, κώνειον, *cicuta*, hemlock. Juvenal attributes his death to hemlock :—

> Dulcique senex vicinus Hymetto,
> Qui partem acceptæ sæva inter vincla cicutæ.

Whatever may have been the species of poison, it was one of weak and slow operation, for the executioner told Socrates that if he entered into earnest dispute, it would prevent its effect; and it was sometimes necessary to repeat the dose three or four times. Its operation was gradually to produce insensibility, coldness of the extremities, and death.

Mr. Petit, in his 'Observationes Miscellaneæ,' remarks that the advertisement was not given by the executioner out of humanity, but to save the cicuta; for he was only allowed so much poison per annum! which if he exceeded, he was to furnish the rest at his own expense. This construction is confirmed by the circumstances as related in Plutarch nearly as follows: When Phocion and his four colleagues, condemned for treason at Athens, were led out to have the customary dose of poison administered, and all had drunk except Phocion, no more hemlock was left; upon which the gaoler said he could not prepare any more, unless twelve drachmæ of money were given him to buy the material. Some hesitation took place, until Phocion asked one of his friends to supply the money, sarcastically remarking that it was hard if a man could not even die *gratis* at Athens.

What was that poison by which Hannibal destroyed himself? It is improbable that we shall ever know. Modern chemistry has discovered a variety of subtle poisons that may be introduced into a ring, and, under certain circumstances, destroy life. One drop of Prussic acid may produce paralysis, and, if taken into the stomach, may instantly arrest the current

of life. But it was not likely that the Carthaginians were acquainted with Prussic acid; Lybia most probably produced poisons sufficiently subtle and destructive to accomplish the fatal purpose of Hannibal. The report of its being bullock's blood must be a fable, as well as in the case of the death of Themistocles, for it is well ascertained that the blood of that animal was not poison. An accomplished nobleman told Sir H. Halford, that he had been present at a bull-fight in Spain, when, after the matador had killed the bull, a person ran up, caught the animal's blood in a goblet, and drank it off, as a popular remedy for consumption.

[Hannibal carried poison in his sword, to despatch himself if he should happen to be surprised in any great extremity; but the sword would have done the feat much better and more soldier-like. And it was below the honour of so great a commander to go out of the world like a rat.—*Butler.*]

With respect to the poison with which Nero destroyed Britannicus, comparing the account given by Tacitus with the effects of laurel-water, Sir Henry was disposed to think that this was the identical drug. It appeared that the Emperor applied to Locusta, a female poisoner, to procure some vegetable poison that would kill speedily. She produced one which destroyed a goat in five hours. Nero, however, required a poison which would kill instantly, and she procured such an ingredient. At the banquet, Britannicus called for water, which the *prægustator* tasted; it was not sufficiently cool; part was then poured off, and the fatal liquid added; the young man drank, was seized with an epileptic fit, and expired. The case is analogous in the effects with that of Sir Theodosius Boughton, who was poisoned by Donellan with laurel-water, and fell down in an epilepsy. In the case of Britannicus, Nero told the company that the young man was liable to such fits; and in the other case, Donellan said that Sir Theodosius had been subject to fits from his infancy. Tacitus mentions a blackness which came over the body of Britannicus; and Sir Henry stated that he was present when the corpse of Sir Thodosius Boughton was disinterred, and its colour resembled that of a pickled walnut. If we could suppose that the Romans

were acquainted with the deleterious property of laurel-water, and with the process of distillation, there could be no difficulty in concluding that Britannicus was poisoned with laurel-water.

It is true the species of *laurus* which yielded the deleterious liquid did not grow in Italy; but it was a native of Colchis, from whence it might have been brought. The *laurus nobilis* (daphne) grew about Rome, and was used in producing the inspirations of the prophetic priestesses. As to the knowledge possessed by the Romans of the art of distillation, they had not, indeed, a still and refrigeratory like the moderns; but they received the vapours from the boiling herbs in a handful of sponge, which, though a rude, was not an inefficient substitute.

Alexander the Great is said to have been poisoned; but this is inconsistent with the very detailed account of his illness given by Arrian. The report was, that the poison was sent by Antiphon, and was of such a peculiar nature, that no silver or metallic substance would contain it, and it was conveyed in the hoof of a mule. But the article was really onyx, as Horace says: now the word *onyx*, in Greek, signifies not only a stone, but *unguis*, a hoof or nail; and the second sense has been evidently given instead of that of a precious stone. Alexander really died of a remittent fever caught at Babylon. As to the cause of it, Arrian expressly states that the king was temperate and forbearing in the pleasures of the table; and when we consider the laborious occupations of Alexander, amidst frost and snow, and especially the marsh miasmata of the Babylonian lakes, Sir Henry thought there was no difficulty in conceiving that this was too much, even for his frame of adamant. The diary of Arrian, containing the details of Alexander's illness and death, vindicates his memory from the imputation of his having brought on his fate by intemperance. Sir Henry Halford closed his learned and interesting paper, by a brief encomium upon the character of Alexander, in the course of which he remarked that the efficiency of the British army in India, which kept millions of natives in subjection, was maintained by the same measures which Alexander devised and executed.

Mr. Grote, in his 'History of Greece,' maintains that the cause of the fever of which Alexander died was intemperance.

Historical Celebrities Poisoned.

It is hard to believe that the great personages of history were poisoned by medicated gloves, bouquets, saddles, slippers, handkerchiefs, &c., like Henry the Sixth of Germany, the wife of Henry the Fourth of France, a prince of Savoy, a king of Naples, and others without number. It is as difficult of credit as that perfect harmony was restored to a married couple, who were previously constantly at daggers drawn, by removing a bundle of hyoscyamus seeds concealed in the room where they habitually sat, as stated in the 'Grand Dictionnaire de Médecine.' Still less conceivable is it that the secret poisons employed by Catherine de Medicis, and those that La Spara, La Tophana in Italy, La Vigorereux and La Voisin in France, made a regular commerce of, could produce death by being used as prescribed at the distance of one or six months, according to the pleasure of the murderess. Amongst the great number of young married women of rank, whom the Pope had executed at Rome in the seventeenth century for poisoning, most of the slow-poisoners were probably guiltless. Madame de Sévigné's inimitable 'Letters' convey the exaggerated terror which no doubt possessed Louis XIV. when he established the *chambre ardente*; and amongst the ladies of noble and even of royal blood, whom the monarch so unreservedly and impartially punished in his reign, La Brinvilliers is the only one unequivocally proved to be culpable: and even here Voltaire has justly pointed out the exaggerations of the *avocat sans cause*, who has reported her crimes and her fate. During the ages up to a recent date, when that witch mania prevailed of which fancy so many thousand innocent persons were victims, not only did ladies pride themselves as much on being bewitched as they do in our days in being bewitching; but there exists irrefragable proof of women, with the rack before their eyes, insisting upon their power of incantation, and to the last agony of torture and of death preserving this ruling passion—the monomania of insane vanity.

Cannot the past *furore* of historians for slow poisoning, in many instances, receive the same explanation?

For those cases of poisoning which are of most habitual occurrence, the vegetable reign affords the most deadly implements. The aqua lauro cerusis has given place, it is true, to a more dangerous and scientific form. Prussic acid is the more dangerous poison; but opium in its many forms, is the poison which the police should most watch. The sale is far from being sufficiently restricted. The salts of lead, whether we judge of them by the palsy and other symptoms produced so insidiously in painters, or in persons who partake of them in wine, in whose adulteration it is so freely used—these salts are most dangerous, slow, and secret poisons.

As to my own opinion, after having wasted much time, that might have been better employed in perusing the voluminous and dusty records of history, I utterly disbelieve in the ability of the utmost perversity to produce slow poisoning once in a thousand attempts.

Abridged from the Medical Gazette.

Female Poisoners.

In the sixteenth and seventeenth centuries, all classes of European society dreaded witchcraft and poisoning to an extent almost beyond conception, and such circumstances, more or less, gave a colour both to political and private life. Poisoning in those days was a great political engine, and caused the Borgias and other families to study the little then known of chemistry, in order to carry out their infamous designs. Poisoned rings, made principally for intending suicides, were once plentiful, and one was used by Hannibal when he killed himself. The poison was usually concealed in these in such a way that it could be sucked out. The ring of the Borgias concealed a small piece of sponge soaked in the poison, and when pressed from the outside, a small barb covered with the poison would spring out. Aconite or monkshood was probably, from all the evidence that can be gathered, the most deadly poison used at that time; the plant itself should now never be kept in gardens, as the flower has little beauty, and deaths have

accidentally been caused by eating the root in mistake for horseradish. The lecturer here exhibited some of the pure poison in a little glass dish, which, he said, contained enough to kill more than 5,000 persons. Another poison, once commonly used for political purposes, and known as 'the powder of succession,' was common sugar of lead, a substance which has helped many titles and estates to change hands. In 1659 many men at Rome became very uncomfortable upon noticing that women who had obnoxious husbands very soon became widows; and it was soon found out that a club of female poisoners existed in the city, and had killed more than 600 persons with Aqua Tofana.

Lecture by C. C. Williams, F.R.S.

Poison of the Asp. Death of Cleopatra.

Cleopatra was present at the decisive battle of Actium, September 2, 31 B.C., and she set the example of flight which was followed by Marc Antony. He attempted suicide, but the wound did not produce immediate death. Cleopatra, when she heard the cries of anguish, and recognised the voice of Antony, despatched a messenger to bid him join her in the tower where she had retreated. Antony, pale and bleeding, was received into the tower by a rope, and here he breathed his last, in the arms and upon the lips of Cleopatra. She then committed suicide, in order to avoid the humiliation of being led in the triumphal procession of Octavianus. Most probably she took poison. According to the story in Plutarch, she was closely watched by order of Octavianus, who suspected her design; but an asp, the reptile she had chosen for her purpose, was brought her by a peasant in a basket of figs. After using her bath, and partaking of a sumptuous supper, she applied the deadly serpent to her arm. Before retreating to her monument or tower, she wrote to Cæsar, who discovered in the tone of her address an earnest of her secret resolution. He despatched his guards in haste; but Cleopatra was no more. When the door of her apartment was burst open, she was dead; her beauty was yet unimpaired. She lay beneath a canopy of

white Pelusian, dropped with gems, upon a golden couch of gorgeous workmanship, attired in all the ornaments of royalty; one of her attendants lay dead by her side, and the other had just strength enough remaining to arrange the diadem on the head of her mistress.

The *Asp* has thus obtained celebrity as the instrument of death selected by Cleopatra. It is often mentioned both by Greek and Roman writers: its modern Arab name is *El Haje*, and it is closely allied to the cobra capello, or spectacled snake of India. Its poison is of the most deadly nature. The habit which this serpent has of erecting itself when approached made the ancient Egyptians imagine that it guarded the place which it inhabited. They made it the emblem of the divinity whom they supposed to protect the world; accordingly, they have represented it on their temples sculptured on each side of a globe.

Gipsies and their Secret Poison.

Among other secrets of the Gipsy race, is the art of preparing what they term the 'drei,' or 'dri,' a most deadly and insidious destructive agent, and for which medical science knows no antidote. Analysis detects no noxious properties whatever, and the most careful examination, microscopical or otherwise, shows it simply to consist of apparently harmless vegetable matter. The 'drei,' then, is merely a brown powder, obtained from a certain species of fungus forming the nearest connecting link between the animal and vegetable kingdoms, the powder consisting of an infinity of sporules. These fungoid sporules possess the peculiar property of being further developed only by intimate contact with living animal matter (as when swallowed, &c.); they then throw out innumerable greenish-yellow fibres about twelve or eighteen inches in length. When the 'drei' is administered, usually in some warm drink, these sporules are swallowed, attach themselves to the mucous membrane, germinate, throw out millions of these silky fibres, which grow with awful rapidity, first producing symptoms of hectic fever, then cough, eventually accompanied by incessant spitting of blood,

till death finally inevitably supervenes, usually in about a fortnight or three weeks' time. A case of this description occurred in Italy in 1860. Although the patient was attended by eminent physicians accustomed to deal with cases of slow poisoning, no suspicions of foul play were entertained till the day after the decease, when an autopsy being held revealed the cause of death. The fibres, the growth of which had ceased with the cessation of the animal life and heat that had supported them, were already partially decomposed; had another day or two elapsed no trace would have been left of the foul deed. If the analysis of the mixture in question reveal no deleterious drug, let a dog or other animal be daily dosed with 'three drops' in some warm vehicle. The result would show whether the brown powder is or is not the world-famous and destructive 'drei.'

Poisons and their Antidotes.

The subject of Poisons was long involved in great mystery, and was the object of much credulity among mankind. Many superstitious terrors were connected with it, and the writers of poetry and romance lent their helping hand to confirm the popular delusions regarding poisons. It was believed to be possible to introduce into the system a poison so nicely adjusted that it would procure the death of an individual at any given moment, weeks or months after it had been administered; that it could be conveyed by means of snuff, or letters, or gloves, or various other ways equally unsuspected. Some atrocious occurrences which happened in France during ten years of the most splendid part of the reign of Louis XIV. spread great alarm on the subject of poisons. Many persons of rank connected with the profligate court of that monarch were believed to have employed poison to accomplish their purposes of love, ambition, or revenge. The secrets appear to have been first vended by a ruined alchemist, of the name of Exili; and from 1670 to 1680 so many crimes were perpetrated, and so many persons accused, that a particular tribunal was erected for the trial of poisoning, and obtained the name of the

Chambre ardente. Several persons who were convicted of selling *succession-powder* were buried at the Place de Grève. Several individuals of rank also suffered by the hands of the executioner for poisoning some of their relations, and others.

Before leaving this horrible subject, we may state, from Dr. Christison, the apparent effects of 'the celebrated *Aqua Tofana*, or *Acquatta di Napoli*, a slow poison, which in the sixteenth century was believed to possess the property of causing death at any determinate period, after months, for example, or even years, of ill-health, according to the will of the poisoner.' The most authentic description of the Aqua Tofana ascribes its properties to arsenic. Hahnemann gives the following account of the symptoms: they are a gradual sinking of the powers of life, without any violent symptoms; a nameless feeling of illness, failing of the strength, slight feverishness, want of sleep, an aversion to food and drink, and all the other enjoyments of life; lividity of the countenance. Dropsy closes the scene, along with black miliary eruptions and convulsions, or liquative perspirations and purging. 'Whatever were its real effects, there appears no doubt that it was long used secretly in Italy to a fearful extent, the monster who gave her name to it having confessed that she was instrumental in the death of no less than 600 persons. She owed her success, however, rather to the ignorance of the age than to her own dexterity. At all events, the art of secret poisoning cannot be easily practised. Indeed, even the vulgar dread of it is almost extinct.'

A similar credulity existed with respect to *antidotes*, or substances that had the power of rendering poison harmless. It was believed that every poison had its own antidote, which was certain of counteracting it; and that a person by taking an antidote in the morning was secured from danger by poison during the whole day. Much of the credulity about poisons and their antidotes is now done away; and when noxious substances have been swallowed, remedies are applied with juster views of the animal economy. The case in which an antidote may be most plausibly suggested is that in which a substance has

been swallowed whose chemical nature is so well known and so much under our power that we can decompose or neutralise it in our laboratories. Thus, if an acid has been swallowed, what is more likely to do good than giving an alkali? or, when a compound salt has been taken, than giving some other to decompose it? But when a substance has once got into the stomach, it is not so easily under our command as if it were in our mortar or vials; some mischief may have been done before our remedy is applied, or the product of our decomposition may be as virulent as the original substance. We are, therefore, not to trust to chemical, but to vital agents, in our treatment of those who have swallowed poison.

From Dr. Macaulay's Dictionary of Medicine.

'Slow poison' dates from a prevailing notion in the reign of Edward VI., that if the poison was given to a person it would infallibly kill him within a certain number of months or years. Shakespeare refers to it as 'a lingering dram.' In modern times, 'slow poison' has been applied to any deleterious poison that works by degrees; strong coffee was, in the last century, condemned as 'slow poison.'

Poison of Scolopendra.

'As investigations are being made to discover an antidote to the poison of venomous centipedes, known as the genus Scolopendra, which attain not unfrequently in tropical climates a length of nine inches and more, the following fact, which has been brought to our notice by Babu Kanylal Dey, is worth notice. This evening he was accidentally bitten by a centipede about five inches long, and the sensation was one of excruciating pain. He immediately killed the insect, and rubbed its juicy matter on the affected part, and the result was instant relief. He had read that the antidote to the poison of venomous insects was carried in their own bodies, and so he made the experiment on his own body, which proved completely successful. Dr. Fayrer will do well to enquire whether the antidote to the poison of the snake cannot be found in its own system.'

Hindu Patriot.

There is a common notion that every poison hath its antidote; upon which Sir Thomas Browne quaintly observes:—

'Though it be true that God made all things double, and that, if we look upon the works of the Most High, there are two and two, one against another; that one contrary hath another, and poison is not without a poison to itself; yet hath the curse so far prevailed, or else our industry defected, that poisons are better known than their antidotes; and some thereof do scarce admit of any. And lastly, although to some poisons men have delivered many antidotes, and in every one is promised an equality unto its adversary, yet do we often find they fail in their effects. Moly will not resist a weaker cup than that of Circe; a man may be poisoned in a Lemnian dish; without the miracle of John, there is no confidence in the earth of Paul; and if it be meant that no poison could work upon him, we doubt the story, and expect no such success from the diet of Mithridates.'

Vulgar Errors, b. vii. c. 17.

Death of King James I.

In the collection of Mr. Beckford, of Fonthill, was a rare print, by Hollar, of the death of King James I., with the following explanatory details beneath:—

'Many writers have asserted that Henry, Prince of Wales, eldest son of James I., was poisoned; and that the King was privy to the act. Certain it is, that at the trial of Carr, Earl of Somerset, James was so fearful of the Earl's speaking of that circumstance, that two persons were provided to stand behind him with a cloak, and the moment he should utter anything reflecting on the King, he was to have been muffled therein, and hurried away; and though James most solemnly vowed to show no favour to any person that should be found guilty of Overbury's death; yet, on the conviction of the Earl and his lady, he was pleased to grant them a lease for ninety-nine years. If he was in any way accessory to the Prince's death, he seems to have experienced the law of retaliation in a singular manner, as a violent suspicion fell on the Duke of

Buckingham, and the countess his mother, of procuring his death by a poisoned plaster, and a posset of the duke's preparation; the physicians who opened him reported his intestines to have been very much discoloured, and his body extremely distorted. Buckingham was greatly declining in favour, and would certainly have been called to account if James had lived for advising the journey of Prince Charles into Spain. In the year 1628, Dr. Lamb, an empiric and supposed necromancer, a great favourite of Buckingham's, was killed in the streets of London by the mob, who hated him as much for his own sake as the Duke's.'

In the above old print King James is represented in bed: on one side 'is certainly Dr. Lamb holding the bottle, as the portrait very much resembles that of him published by Mr. Thane.' On the opposite side of the bed is a figure saying, 'Thanks to the chymist.' Behind a table garnished with death's heads, is a priest saying, '*Sumus fumus*' (We are smoke).

'Of King James's death were many scandalous rumours spread, and some were so impudent as to write that he was poisoned; but King James being dead, and his body opened, there was found no sign at all of poison; his inward parts being all sound; but his spleen was a little faulty, which might be cause strong enough to cast him into an ague, the ordinary highway, especially in old bodies, to a natural death; of this ague, after a month's languishing, he died.'

King James I. died at Theobalds, March 27, 1625. 'His body for the greater state (says Baker) was conveyed by torchlight from Theobalds to Denmark House (Strand), where, having rested from April 23 to May 7, it was carried to Westminster, and there interred in St. Peter's church with great solemnity, but with greater lamentation; there being scarce any of the infinite multitude that was present of whom it might not be said,

Multa gemens, largoque humectat flumine vultum.

The King (Charles I.) was principal mourner; which, though it was contrary to the custom of his predecessors, yet he chose

rather to express his piety in attending the body of his father at his funeral than to stand upon any old niceties and points of state.'

Cherry-Laurel Poison.

The leaves of the cherry-laurel have a flavour resembling that of bitter almonds or other kernels; and from this circumstance an infusion of the leaves has been employed to give flavour to custards, puddings, and other articles for the table. But, as it is undoubted that the cherry-laurel has poisonous qualities, such dangerous flavourings should never be used. One woman who had lost her life by drinking laurel-water, thinking it to be a cordial, in a quarter of an hour after drinking two-thirds of two ounces complained of a violent disorder in her stomach, soon after lost her speech, and died in about an hour, without vomiting, or purging, or any convulsion. By experiments on brute animals, it appears that this poison is destructive to life, not only when taken into the stomach, but also on being injected into the intestines, or applied externally to different organs of the body. It is now considered that the destructive properties of cherry-laurel water are owing to its containing prussic acid.

Although the poisonous nature of laurel-water and black-cherry water has long been known, they are still employed in cookery and confectionery; and their baneful effects have doubtless been often attributed to the use of copper vessels. Of this order are bitter almonds, the kernels of plums and peaches, the seeds of the apple, the leaves of the cherry laurel, &c.—all which yield on distillation with water a sweet-smelling liquid, containing hydrocyanic or prussic acid. We are most familiar with this acid in the smell of the wallflower and hawthorn. It exists in the leaves of the common laurel so largely, that water distilled from it is almost instantaneous poison. This fact was discovered at Dublin in 1728, where several persons who had used the water as a cordial were poisoned. Yet the 'flavouring' so commonly used for custards and farinaceous puddings contains a large proportion of this deadly

poison. Professor Santi, of Pisa, many years since wrote an interesting little work to show that Ratafia had long been made with Italian laurel leaves. Kirschwasser is drawn from the stones of cherries chiefly grown in the environs of the Black Forest. According to Le Normand, the chemist, it is 'downright poison.' In Paris a spurious Kirschwasser is distilled from the kernels of prunes. There is, however, another danger. Sometimes this flavouring has been labelled 'Essence of Peach,' which has been known to induce a little boy who had seen the bottle used in making custards to drink off the contents, when death followed. The bottle should have been labelled 'Poison.' When ill effects arise from eating articles flavoured as above, there should be given a small glass of brandy, containing from fifteen to thirty drops of water of ammonia, or a teaspoonful or two of hartshorn. But the only immediate remedy of safe application by a non-medical person for poisoning by prussic acid, or any vegetable substance containing it, is *pouring a stream of cold water* from some elevation upon the head and spine of the patient. The lives of many persons have been saved by this very simple means being resorted to immediately, while the delay of a few minutes would have proved fatal.

The most remarkable case of poisoning with laurel-water was that of Captain Donellan, in 1791. He had been master of the ceremonies at the Pantheon, in London, and at Bath, and married Miss Boughton, sister to the minor Sir Theodosius Boughton, of Warwick, to whom she was heir in the event of his death. Sir Theodosius had some vials of medicine sent by the apothecary, and on swallowing the contents of one of them he instantly fell back in a fit, foamed at the mouth, and died. It was afterwards proved that he had a still, and prepared laurel-water; and that he was active in rinsing the vial after the baronet's death. There was medical testimony that no poison could operate so suddenly, and that the revulsion from swallowing a nauseous medicine might produce the above effect. Donellan, however, on presumptive evidence, supported by his sinister motive, was convicted, and hanged at Warwick.

Poisonous Fishes.

Oysters have been known to produce numerous accidents, and, when they were of a green colour, it has been supposed that this peculiarity was due to copper banks. This is an absurdity; the green tinge is natural to some varieties, whose bones are invariably of the same hue as verdigris. Mussels frequently occasion feverish symptoms, attended with a red and sometimes copper coloured efflorescence over the whole body. These accidents appear to arise from some peculiar circumstances. In Boulogne, Dr. Mullinger attended the family of Sir James Grant; when all the children who had eaten mussels were labouring under this affection, while not another instance of it was observed in the place. In the Bahama Islands, Dr. Mullinger witnessed a fatal case of a young girl who had eaten crabs; she was the only sufferer, although every individual in the family had shared in the meal. The idea of the testaceous mollusca avoiding copper-bottomed vessels, while they are found in abundance on those that are not sheathed, is absurd; a circumstance easily explained by the greater facility these creatures find in adhering to wood. There is every reason to believe that the supposed poisonous oysters found adhering to the coppered bottom of a ship in the Virgin Isles, and the occasional accidents among the men that ate them, were only so in the observer's imagination, and that part of the ship's company were affected by some other cause. Another report, equally absurd, was that of the fish having gradually quitted the Thames and Medway since coppering ships' bottoms had been introduced. The following may be considered the fish that should be avoided (from Dr. Dancer's 'Jamaica Practice of Physic'):

The Spanish mackerel
Yellow-billed sprat
Baracuta
Grey snapper
Porgie
King-fish
The hyne.
Bottle-nosed Cavallo
Old wife
Conger eel
Sword-fish
Smooth bottle-fish
Rock-fish

Accidents have arisen from the use of the dolphin in the high seas. A melancholy instance occurred while Dr. Mullinger was in the West Indies, when the captain, mate, and three seamen of a trading vessel died from the poison ; a passenger, his wife, and a boy were the only survivors, and were fortunately picked up in the unmanageable vessel.

The Deadly Nightshade.

The Deadly Nightshade (*Atropa Belladonna*) is indigenous to Great Britain, and usually met with in sheltered situations, hedges and waste ground, on a calcareous soil. The plant dies down to the ground every winter, shooting forth early in the spring, growing rapidly, and with great luxuriance ; stems branching, and slightly downy, with large healthy-looking leaves, mostly two together of unequal size, ovate and acute, very different in appearance from all other kinds of Nightshade. The flowers, which appear in June, are imperfectly axillary, solitary, stalked, drooping, dark full purple in the border, paler downwards, about an inch long, and have no scent. The berries are of a rich purplish black, sweetish, about the size of a small cherry ; are ripe in August, and of a *deadly narcotic quality.*

Atropos was the name of one of the Fates in the Heathen Mythology, and as her duty was especially to cut short the thread of human life, this poisonous plant is very appropriately named after her ; but why *belladonna*, which signifies a *beautiful lady*, was added, is not known.

The effect that is usually produced upon anyone who has eaten of the berries is to dilate the pupil of the eye in a most extraordinary manner ; obscurity of vision, giddiness, delirium and death soon follow. It has been supposed that it was the juice of this plant which produced such remarkable and fatal effects on the Roman soldiers, during their retreat from the Parthians. Buchanan relates that the Scots mixed the juice with bread and drink, which, by their truce, they were to supply the Danes, which so intoxicated them, that the Scots killed the greatest part of Sweno's army while asleep. And we have had

many recent illustrations of the fatal effects of Nightshade upon persons who have ignorantly eaten of the berries. In August 1844 several persons became alarmingly ill, and were with difficulty restored, one dying. In August 1846 no less than three persons lost their lives from eating berries purchased of a man in the streets; the man who sold them was taken up and tried for his life, but, by the advice of his counsel, he pleaded guilty to the minor offence of manslaughter, and received six months' imprisonment.

The Danger of Soothing Cordials.

Infantile mortality from poisoning by syrups, cordials, and carminatives was generally thought to have all but ceased. 'Carminatives' and 'Cordials' have of late years gone almost out of use, and the evil effects resulting from them have diminished in proportion. Syrup of poppies now appears to be the favourite 'soother' of infants; at all events, the newspapers report two cases in which death resulted from the administration of this 'harmless' dose. In one case the child was eighteen weeks old, and a teaspoonful of syrup of poppies was administered to it, in consequence of its being restless after vaccination. The child died in about twenty-six hours. Eventually the verdict returned was 'That the deceased died from the administration of sixty drops of syrup of poppies, given by its mother medicinally, in ignorance of its poisonous properties and effects.' In the second case the infant was five weeks old, was suffering from a bad cough, and three parts of a teaspoonful of the syrup of poppies was administered to it, and it died in the course of a few hours. The verdict was that 'Deceased had died from an overdose of poison, administered with no felonious intention.' Much misapprehension exists in the public mind respecting the strength of syrup of poppies. It is always a most uncertain preparation, and should never be used except under the advice of a medical practitioner.

Medical Times and Gazette.

Laudamy and Calamy.

Mr. Gillies, in his 'Reminiscences of Sir Walter Scott,' relates: 'It happened at a small country town that Scott suddenly required medical advice for one of his servants, and on enquiring if there were any doctor in the place, was told that there were two—one long established, and the other a newcomer. The latter gentleman being luckily found at home, soon made his appearance—a grave sagacious-looking man, attired in black, with a shovel hat, in whom, to his utter astonishment, Sir Walter recognised a Scotch blacksmith, who had formerly practised with considerable success as a veterinary operator in the neighbourhood of Ashestiel. 'How, in all the world!' exclaimed he, 'can it be possible that this is John Lundie?' 'In truth is it, your honour—just *a' that's for him.*' 'Well, let us hear: you were a *horse*-doctor before! now, it seems, you are a *man*-doctor; how do you get on?' 'On, just extraordinar weel; for your honour maun ken my practice is vera sure and orthodox. I depend entirely upon twa simples.' 'And, what may their names be? Perhaps it is a secret?' 'I'll tell your honour;' (in a low tone) 'my twa simples are just *laudamy* and *calamy*!' 'Simples with a vengeance!' replied Scott. 'But, John, do you never happen to *kill* any of your patients?' 'Kill? ou ay, may be sae! Whiles they dies and whiles no; but it's the will o' Providence. *Ony how, your honour, it wad be lang before it makes up for Flodden!*'

The Sale of Poisons.

The evidence of Dr. Alfred Swaine Taylor before Parliament (1865) is very strong as to the necessity of legislative restriction on the sale of poisons. Dr. Taylor mentioned, among others, the following, in the report of an assistant in a shop supplying arsenic instead of calomel: it led to a death, and a trial at the Old Bailey. 'He was a dispenser in a shop; I believe the accident arose from his being in a hurry, and from the fact that there was arsenic, in powder, near to the calomel

in the shop at this time; a mere accident. At the same time there was a great want of caution in supplying arsenic for calomel. There was a want of caution in keeping the arsenic near the calomel, and great ignorance and great want of knowledge in a man weighing out arsenic for calomel.' The following is another instance:—'In one morning, upwards of 300 cases of poisoning by arsenic came before me at once, from an industrial school near London. A messenger brought to me the material that had caused the illness. On examining it, I found it to be a strongly saturated solution of arsenic; and on going into the history of the case (I think there were 370 children made ill), I found that arsenic had been mixed with the milk, and each child had taken about a grain of the poison. Many pounds of arsenic had been put into a steam-boiler with soda, the whole had been allowed to mix, and the water had been drawn off from the steam-boiler to mix with the children's milk; 370 children suffered from the effects of the arsenic. Fortunately they all recovered, at different periods, by vomiting and treatment. On going into the matter, which I laid before the Secretary of State at the time, it was found that nothing could be done, because the arsenic had not been sold; it had been used by some engineer for the purpose of removing the fur from the steam-boiler. The man had used a large quantity to clean off the fur, and had given no information about it, and thus led to the accident.' Other similar instances mentioned were these:—'A friend of mine very nearly lost his life. He sent to one of these village shops near Windsor for an ounce of tincture of rhubarb. It was laudanum that was sent to him. Any person educated in pharmacy would have known the distinction immediately by the smell, but the ignorant woman sent an ounce of laudanum. He had a narrow escape of his life, and has not been to a village shop since. I now come to another article; and that is a substance only recently discovered, or comparatively recently discovered, and which is now largely used with reference to the aniline dyes—nitrobenzole. It is a very powerful poison in some respects. It has some of the character or smell of the oil of bitter almonds. I had a case of poisoning with it lately referred to me. It was

sold for the purpose of giving a flavour to confectionery, and it acted so quickly on the person who took a small quantity that he died a short time after. The difficulty about this poison is this—a person may take it and appear well for some hours, as if nothing was the matter with him. There was a coachman who went into the kitchen where the cook used this in place of oil of bitter almonds for flavouring pastry, and after tasting it he did not appear to suffer any ill effects. The man jumped on the coach-box, and took his master for a drive; it was only on returning home, some time after he had tasted this liquid, that he felt very ill, and he soon died. This liquid would not probably get into common use, because it could not be given to a person without his knowledge, as it has a peculiar smell. It is a dangerous substance to be allowed to be kept by uneducated persons. It has been a result of my practice to see a large number of deaths from poison, and I am more impressed with the necessity of seeing something done to prevent these deaths from occurring.'

The Peach, we gather from Dr. Daubeny's 'Lectures on Roman Husbandry,' was brought from Persia, and Columella alludes to the fable of its poisonous qualities. 'Could this mistake arise,' asks Dr. Daubeny, 'from a knowledge of the poisonous properties of the prussic acid existing in the kernels of the peach?' It may be observed that a notion prevailed in Egypt, probably referring to the secret of the Psylli, that a citron eaten early in the morning, was an antidote to all kinds of poison. Its juice, injected into the veins, would have a similar effect. Blackberries, when perfectly ripe, were eaten by the Romans; and by the Greeks were considered a preventive of gout.

A young woman accidentally swallowed some of a mixture of laudanum and chloroform, with some prussic acid in it. Hot coffee and nitric ether were administered by a medical man, but failed. By cold water poured on the face and head at intervals, during sixty hours, the distressing symptoms disappeared.

VALENTINE GREATRAKES, THE MAGNETISER.

GREATRAKES, without mentioning magnetism, or laying claim to any theory, practised upon himself and others a deception much more akin to the animal magnetism of the present day than the mineral magnetism it was then the fashion to study. He was the son of an Irish gentleman, of good education and property, of the county of Cork. He fell at an early age into a sort of mental derangement, and strongly persuaded himself, were he asleep or awake, that God had given him the power of curing the king's evil. To make a trial of the power that was in him, he one day went to William Maker of Lismore, who was grievously afflicted with the king's evil in his eyes, cheek and throat. Upon this man, who was of abundant faith, he laid his hands, stroked him, and prayed fervently; and in a few days he saw him heal considerably; and finally, with other remedies, was quite cured. All the county of Cork was in a commotion to see this extraordinary doctor, who, in a letter to the Hon. Robert Boyle, states that such great multitudes flocked to him, that the neighbouring towns could not accommodate them. He then went to his house at Youghal where the sick people came in great numbers from Ireland and England; and several of these credulous people when they saw Greatrakes fell into fits, and he restored them by waving his hand in their faces, and praying over them. Nay, he affirmed that the touch of his glove had driven pains away, and on one occasion cast out from a woman several devils or evil spirits, who tormented her day and night. 'Every one of these devils,' says Greatrakes, 'was like to choke

her when it came up into her throat.' It is evident from this that the woman's complaint was nothing but hysteria.

The clergy of the diocese of Lismore set their faces against this new prophet and worker of miracles; but Greatrakes imagined that he derived his power direct from heaven, and continued to throw people into fits and bring them to their senses again, as usual, after exactly the fashion of modern magnetisers. His reputation became at last so great that Lord Conway sent to him from London, begging that he would come over to cure a grievous headache which his lady had suffered for many years, and which the principal physicians of England had not been able to relieve. Greatrakes accepted the invitation, and tried his manipulations and prayers upon Lady Conway, but in vain. He lived for some months in Lord Conway's house, at Ragley, in Warwickshire, making cures similar to those he had performed in Ireland. He afterwards removed to London, and took a house in Lincoln's Inn Fields, which soon became the daily resort of all the nervous and credulous women of the metropolis. St. Evremond narrates that the prophet affirmed that 'all diseases were caused by evil spirits. Every infirmity was with him a case of diabolical possession.' A man was presented to him suffering from gout and rheumatism. 'Ah!' said the miracle-worker, 'I have seen a good deal of this sort of spirit, when I was in Ireland. They are watery spirits, who bring on cold shivering, and excite an overflow of aqueous humour in our poor bodies.' Then, addressing the man, he said, 'Evil spirit, who hast quitted thy dwelling in the waters to come and afflict this miserable body, I command thee to quit thy new abode, and to return to thine ancient habitation!' This said, the sick man was ordered to withdraw, and another was brought forward in his place. This new comer said he was tormented by the melancholy vapours. In fact, he looked like a hypochondriac: one of those persons diseased in imagination, and who but too often become so in reality. 'Aerial spirit,' said the Irishman, 'return, I command thee, into the air, exercise thy natural vocation of raising tempests, and do not excite any more wind in this sad, unlucky body!' This man was immediately turned away to make room for a third patient,

who, in the Irishman's opinion, was only tormented by a little bit of a sprite, who could not withstand his command for an instant. He pretended that he recognised this sprite by some marks that were invisible to the company, to whom he turned with a smile and said, 'This sort of spirit does not often do much harm, and is always very diverting.' To hear him talk, one would have imagined that he knew all about spirits—their names, their rank, their number, their employment, and all the functions they were destined to; and he boasted of being much better acquainted with the intrigues of demons than he was with the affairs of men. You can hardly imagine what a reputation he gained in a short time. Catholics and Protestants visited him from every part, all believing that power from heaven was in his hands.

St. Evremond thus sums up the effect produced by Greatrakes on the popular mind. 'So great was the confidence in him that the blind fancied they saw the light which they did not see—the deaf imagined that they heard, the lame that they walked, and the paralytic that they recovered the use of their limbs. An idea of health made the sick forget for a while their maladies; and imagination, which was not less active in those merely drawn by curiosity than in the sick, gave a false view to the one class, from the desire of seeing, as it operated a false cure in the other from the strong desire of being healed. Such was the power of the Irishman over the mind, and such was the influence of the mind upon the body. Nothing was spoken of in London but his prodigies; and these prodigies were supported by such great authorities, that the bewildered multitude believed them almost without examination, while more enlightened people did not dare to reject them from their own knowledge. The public opinion, timid and enslaved, respected this imperious, and apparently well-authenticated error. Those who saw through the delusion, kept their opinion to themselves, knowing how useless it was to declare their disbelief to a people filled with prejudice and admiration.

Thus, while Valentine Greatrakes was *magnetising* the people of London, an Italian enthusiast, named Francisco Bagnone,

was performing the same tricks in Italy, and with as great success. He had only to touch weak women with his hands, or sometimes (for the sake of working more effectively upon their fanaticism) with a relic, to make them fall into fits, and manifest all the symptoms of magnetism.

Next, Van Helmont published a work on the effects of magnetism on the human frame, and Balthazar Gracian, a Spaniard, asserted 'the magnet attracts iron; iron is found everywhere; everything, therefore, is under the influence of magnetism. It is only a modification of the general principle, which establishes harmony, or foments divisions among men. It is the same agent that gives rise to sympathy, antipathy, and the passions.'—*Dupotet.*

Baptista Porta had also great faith in the efficacy of the magnet, and operated upon the imagination of his patients in a manner which was then considered so extraordinary that he was accused of being a magician, and prohibited from practising by the court of Rome.

Wirdig, professor of medicine at the University of Rostock in Mecklenburg, wrote the 'New Medicine of the Spirits,' which he presented to the Royal Society of London 1683; in which the author maintained that a magnetic influence took place, not only between the celestial and terrestrial bodies, but between all living things. The whole world, he said, was under the influence of magnetism; life was preserved by magnetism; death was the consequence of magnetism.

Maxwell, a disciple of Paracelsus, in his works printed at Frankfort, 1679, says: 'If you wish to work prodigies, abstract from the materiality of beings, increase the sum of spirituality in bodies, rouse the spirit from its slumbers. Unless you do one or other of these things, unless you can bind the idea, you can never perform anything good or great.' Here, in fact, lies the whole secret of magnetism, and all delusions of a similar kind: increase the spirituality, rouse the spirit from its slumbers, or, in other words, work upon the imagination—induce belief and blind confidence—and you may do anything. This passage, which is quoted with approbation by M. Dupotet as strongly

corroborative of the theory since advanced by the animal magnetists, is just the reverse. If they believe they can work all their wonders by the means so dimly shadowed forth by Maxwell, what becomes of the universal fluid pervading all nature, and which they pretend to pour into weak and diseased bodies from the tips of their fingers?

For sixty or seventy years, magnetism was almost wholly confined to Germany. About 1771 or 1772, one, Father Hell, a Jesuit, and professor of astronomy at the University of Vienna, became famous by his magnetic cures, by inventing steel plates of a peculiar form, which he applied to the naked body as a cure for several diseases. In 1774, he communicated his system to Anthony Mesmer, who improved upon the ideas of Father Hell, constructed a new theory of his own, and became the founder of animal magnetism.

Abridged and Selected from Extraordinary Popular Delusions, by Charles Mackay, LL.D. edit. 1852.

Animal Magnetism in London in 1837.

Baron Dupotet, the principal professor of Animal Magnetism in Paris, having arrived in London in 1837, publicly invited any gentleman who desired instruction in the doctrines of Animal Magnetism, to visit him at his house in Maddox Street, Hanover Square. Here, a party of twelve or thirteen gentlemen being assembled, on the floor of the room, Baron Dupotet was seated in front of a gentleman who had offered himself for experiment. After keeping the points of their thumbs together for some time, till the temperature of both was the same, the Baron pressed his hands on the patient's shoulders, and passed lightly over his arms, till their hands again touched. He repeated this two or three times, and then, stretching forth his hand with the fingers closed, he moved it gently, with a downward motion, over the patient's face, at about two inches distance from his nose. He then continued the waving action of the hand down the stomach and legs, and, having finished the whole length of the body, returned to the brow. This was continued for nearly a quarter of an hour, and the patient persisted in saying that he experienced no change.

At last, however, he seemed to feel some of the effects the Baron had foretold: his colour disappeared, and he confessed his heart beat in a way he had never experienced before. The Baron renewed his manipulations with renewed activity, and shortly stated that he had acquired a certain degree of influence over the patient, which a few days more of the magnetic operation would complete. He now stood up and informed the company that the attraction established between himself and his patient was already so great that it would be impossible for the magnetised to resist following him to whatever part of the room he went. He then, in five or six long, deliberate steps, proceeded to the lobby at the top of the stairs, looking round all the time at the patient, who struggled with himself for some time, but yielded to the influence, and cried out to be held or he must follow, as if he were dragged by a strong chain. As the gentleman appeared considerably excited, the Baron did not think it right to carry the experiment any further.

Some of the company being extremely anxious to see the effect of the magnetism upon a somnambulist, the Baron introduced his domestic Julie, and made her sit down on the sofa. Julie seemed a quiet, simple peasant, of about forty years of age, not good-looking, and rather fat, but withal of prepossessing appearance, and very modest, retiring manners. After a few minutes' conversation with several of the spectators, in answer to whose questions she said she was not in good health, but felt herself greatly benefited by the Baron's treatment, the experiment was begun. Standing about three feet from the sofa, the Baron stretched forth his hand, and kept waving it downwards all along her face and body. In a few minutes Julie's eyes began to close, her head nodded as if in the beginning of slumber, and at the end of less than five minutes her chin fell upon her breast, and she was in a profound sleep.

To outward appearance, the sleep was natural and calm; the breath came tranquilly, and she seemed unconscious of every noise. The Baron addressed her, and to all his questions she replied immediately, but remained dumb when spoken to by anyone else. As it needed to be in 'magnetic rapport' with

Julie, in order to have any conversation, the writer of this account, a correspondent of 'Blackwood's Magazine,' offered to undergo the following process.

'Our hand was placed in Julie's, which closed strongly and firmly on it, with a gradually increasing pressure, till at last it fairly assumed what is called the "magnetic grip." We now addressed the fair sleeper, and told her we had a headache, and asked her how it was to be cured. She said by taking castor-oil, and eating chicken-broth—composed of half a chicken, two carrots, and a quarter of a pound of barley.

'A gentleman now attempted to separate our hands, when the wrath of the somnambulist was roused, her veins swelled with passion, and a perseverance in the attempt would have thrown her into hysterics. Large quantities of snuff were put into her nose, without producing the least effect; pins were stuck into her arms and legs without being noticed, and it seemed impossible to make the slightest impression on her senses in any way. The Baron released our hands, and after a few more wavings before her face, ordered her to open her eyes. In a moment the lids were lifted, and the eyes were seen directed upwards, and void of all expression. A handkerchief was suddenly waved close to them, but she did not wink, nor was there any movement in the pupil. After many endeavours to produce some movement by striking with great force within an inch of the iris, the Baron ordered her to shut her eyes, and the lids fell down with the rapidity of a portcullis. He now took a little walking cane, tipped with silver, and pointed it for a minute at Julie's nose, and she instantly began sneezing from the effects of the snuff that had previously been introduced. After a short time, he touched her on the knee, moved his head crosswise before her face, as if tearing aside something that covered it, and exclaiming, "Awake! awake!" presented Julie to the company, looking as simple and unconcerned as when she first came into the room. She said she was quite unconscious of all that had passed, and could scarcely believe she had taken any snuff, and had no recollection of the chicken-broth and castor-oil. In all this, there was no apparent desire to do anything in an underhand way. Everything was fair and open, and the Baron, in all his operations, followed the

suggestions of anyone who chose to offer them. The rod was pointed to the nose in perfect silence, without a word having been said, which could let Julie know what was about to be done. Noises were made at her ear, enough to produce a start on the stoutest nerves without effect; and, however prejudiced may be the observer, it must be confessed that if there is not something extraordinary in magnetism itself, there is something very wonderful, indeed, in Julie's acting.'

Accidents from Lightning.

The public are, as yet, uninformed of the proper treatment to be adopted in cases of injury by lightning, and of the wonderful and immediate relief afforded by 'cold affusion.' Thus, when a person is struck down, buckets of cold water should be poured on the head immediately; and if the arms or legs are found *benumbed* or *paralysed*, they should be immersed in a bucket of cold water. The pain, however, in the loins, neck, and shoulders will, in most cases, remain for several days, but by degrees will gradually go off. The proportion of these accidents among males and females is as one to eight. ('Notes and Queries,' 2nd series, x. p. 145). According to Pliny, Miraldus, and others, houses are protected from lightning on which the house-leek grows; and we remember this belief common in Sussex.

Imagination in Science.

That highly philosophical thinker, the late Sir Benjamin Brodie, says, 'physical science, more than anything besides, helps to teach us the actual value and right use of the imagination—of that wondrous faculty which, left to ramble uncontrolled, leads us astray into a wilderness of perplexities and errors, a land of mists and shadows; but which, properly controlled by experience and reflection, becomes the noblest attribute of man—the source of poetic genius, the instrument of discovery in science; without the aid of which Newton would never have invented fluxions, nor Davy have decomposed the earths and alkalies, nor would Columbus have found another continent.'

Address to the Royal Society, 1859.

A CHAPTER *on* CHLOROFORM.

THE use of Anæsthetics, or substances for producing temporary insensibility to pain, appears to have been known and practised for ages before the organic chemistry of our own times enabled us to place pain under the dominion of the human will, by the discovery and use of Chloroform.

Anæsthesia, as such agency is termed, was known eighteen centuries ago, when the Greeks and Romans used the root of the mandrake 'to cause insensibility to pain in those who are to be cut or cauterised; for, being thrown into a deep sleep, they do not perceive pain.' Pliny tells us that the juice of mandragora had a narcotic effect as a remedy for injuries inflicted by serpents, and before incisions are made in the body, in order to ensure insensibility to pain. 'Indeed,' he adds, 'for this last purpose, with some persons, the odour of it is quite sufficient to induce sleep.' 'Again, by drinking mandrakes with wine,' says Apuleius, 'a limb may be cut off without any sense of pain.' All narcotic medicines will produce conditions of anæsthesia in which surgical operations may be performed without pain. During the influence of alcohol on the nervous system in drunkenness, operations have been performed without the knowledge of the patient.

M. Stanislaus Jullien has discovered that the Chinese, in the third century of our era, employed an anæsthetic agent, in the same manner as we use chloroform and ether, for producing insensibility during surgical operations. It is stated that Hoathi, who flourished between the years 220 and 230 of our era, gave to the sick a preparation of chanvre (ma-yo), when, in a

few moments, the patient became as insensible as one plunged in drunkenness, or deprived of life; then, according to the case, he made incisions, amputations, etc. After a certain number of days, the patient found himself re-established, without having experienced during the operation the slightest pain. This preparation is prepared by boiling and distillation, and is set down as the Indian hemp, which is taken even now by the Arabs to produce agreeable intoxication. Mesdric, a surgeon in the latter half of the thirteenth century, in his work on surgery, mentions 'a flavour for performing surgical operations,' made of 'opium, mulberry, henbane, hemlock, mandrake, wood-ivy, and lettuce, to be boiled until concentrated in a sponge, which, when wanted, was to be warmed, and applied to the nostrils of him who is to be operated on, until he has fallen asleep; and so let the surgery be performed.' In 1579, Bulleyn described 'the possibility of setting patients into an anæsthetic state during lithotomy, etc.,' by the use of mandrake. In Baptista Porta's 'Natural Magic,' among the recipes for medicines for producing sleep instantly is the 'stuping apple,' a compound of mandrake, opium, etc., the smelling of which binds the eyes with deep sleep. Now, the mandrake is of the same genus as belladonna, which has a greater power of annulling sensibility than any plant in present use, unless it be aconite; and it is thought not unlikely to possess the anæsthetic quality ascribed to it, at least to such an extent as to be employed in surgical operations under its influence without conscious pain. (Dr. Chapman, 1850.)

The narcotic and anæsthetic properties of Indian hemp were known to the Scythians, who inhaled the fumes of hemp-seed thrown upon red-hot stones; and Indian hemp has been set down as the *Nepenthe* of Homer, and brought from Egyptian Thebes. Bang, which is prepared from Indian hemp grown in Africa, is taken by criminals who are condemned to suffer amputation; and Sir Joseph Banks testifies to this use of it. Hemp is smoked in Congo, Angola, and South Africa; its leaves, seeds, and flowers are pounded and mixed with a confection, a piece of which, the size of a walnut, when eaten, will

deprive a man of reason, but is described as 'the increaser of pleasure.'

Towards the close of the last century, Lassard, a surgeon of Paris, recommended the employment of a narcotic previous to serious and painful operations; and in a work by Meissner, in 1782, it is stated that Augustus, King of Poland, was surreptitiously narcotised by his favourite surgeon, Weiss, while a part of his foot, which had mortified after being wounded, was cut off without pain or consciousness. Shakespeare, in 'Cymbeline,' describes the imagined effects of subtle distilled potions, producing, without danger, a prolonged state of death-like sleep or lethargy; and Middleton, the old dramatist, 1657, directly refers, in the following lines, to the practice of anæsthesia in ancient surgery:—

> I'll imitate the pities of old surgeons,
> To this lost limb—who, ere they show their art,
> Cast one asleep; then cut the diseased part.

Mesmerism has been employed as an anæsthetic agent in India, America, France, and England, but with by no means uniform success.

It was only from the science of chemistry that the seekers after a perfect anæsthetic agent were guided in the true direction; and it was ascertained that by means of the inhalation of various kinds of gases many maladies would become amenable to the power of the physician. In 1799 Humphry Davy breathed nitrous oxide, which he found to lessen the pain of cutting a wisdom tooth.

Forty-four years had, however, to elapse after Davy's announcement that, 'as nitrous oxide seems capable of destroying physical pain, it may probably be used with advantage during surgical operations,' before this pregnant suggestion was acted on. In 1818, an article, believed to have been written by Mr. Faraday, and published in the 'Quarterly Journal of Science,' described the great resemblance between the effects of the vapour of ether and those of nitrous-oxide gas. In 1844, Horace Wells, a surgeon-dentist, of Hartford, Connecticut, United States, having inhaled the gas, another dentist, Dr.

Rigg, drew one of his teeth without pain; and Mr. Wells, after recovering from the inhalation, exclaimed, 'A new era in tooth-drawing!' He then made other experiments, with various success; but a failure so annoyed him, that he became unsettled, came to England, returned to America, and at length died by his own hand, in January 1848. Within three months Dr. Bigelow, of Boston, United States, removed a breast from a patient who had been rendered insensible by inhaling nitrous oxide. Next Morton, Wells's pupil and partner, and Dr. Jackson, having discovered that ether was much preferable for this purpose to nitrous oxide, they made known the important fact that under the influence of this agent an insensibility might be produced under which persons might undergo the most severe operations without pain, and might be restored from this condition without injury to their health. On September 30, 1846, by the inhalation of ether Morton made himself unconscious during eight minutes; he also persuaded a patient to inhale ether from a handkerchief, and then extracted a bicuspid tooth, of which the patient knew nothing till he recovered his senses. The remedy was afterwards frequently used. Notwithstanding this success, the American medical journals condemned the discovery as a quackery, confirming the proverb, that 'a prophet hath no honour in his own country;' but the English journals at once rightly appreciated it; though in November 1846 the Paris surgeons received the announcement with all but indifference. Velpeau politely declined even to test its worth; yet, in January 1847, the two great surgeons, Velpeau and Roux, averred, in the presence of the two Academies, that the discovery was 'a glorious conquest for humanity.' In London the action of this agent was extensively tried, and rightly appreciated. In January 1847 the first experiment was made in England by employing the inhalation of sulphuric ether as a means of rendering surgical operations painless. The application had been communicated by Morton to Dr. Boott of No. 24 Gower-Street, who described the same to Mr. Robertson, the surgeon-dentist, also of Gower Street, who, on the following day, operated upon a lady thrown into sleep by the inhalation, during which a molar tooth was extracted

from her lower jaw. The inhalation occupied a minute and a half, and the patient's recovery from sleep another minute. Dr. Boott questioned her respecting the tooth, and she expressed her great surprise at finding that it was removed. She said that all she felt was merely a sensation of cold around the tooth, a sensation which was caused, perhaps, by the coldness of the extracting instrument. The apparatus employed consisted of the lower part of Nooth's apparatus, with a flexible apparatus, to which were attached a ball-and-socket-valve and mouth-piece, similar to those commonly employed for inhalation, together with a nasal spring. The full effect of the vapour was produced in from one to two or three minutes generally, and, as soon as it was perceived, the operation was performed.

Chloroform quickly superseded ether, and Morton found his patent valueless, his business destroyed, and, even the bare honour of the invention wrested from him. But the pain with which we think of his misfortunes is greatly lessened by the knowledge of his attempt to keep his discovery a secret, and, under the name of 'Letheon,' to secure the possible profits of it exclusively for himself, by means of a patent, contrary to the usages of the profession.—*Dr. Chapman, Westminster Review*, 1859.

A month after the first application of ether in England, Dr. Simpson, of Edinburgh, discovered that by its instrumentality the ordinary pains of maternity might be averted without danger. The remedy was used also, with a greater or less degree, in some of the most fearful and painful diseases; and by its aid many persons were rescued from certain death who must otherwise have undergone a difficult and most painful operation.

The mixture, improperly called chloric ether, which is simply a solution of chloroform in alcohol, was, early in 1847, demonstrated by Mr. Jacob Bell to possess anæsthetic power. He exhibited its effects at St. Bartholomew's and Middlesex Hospitals. But, it was Dr. Simpson who, upon the suggestion of Mr. Waldie, of the Apothecaries' Hall of Liverpool, first tried chloroform undiluted, discovered the effects of its vapour, and

thus bound his name indissolubly with one of the greatest boons ever conferred on man.

The action of ether, and the best mode of administering its vapour, was investigated by Dr. John Snow, who, in September 1849 published a work on 'The Inhalation of the Vapour of Ether.' This subject was investigated with great success in Edinburgh, and led to the discovery by Dr. Simpson, of that city, of Chloroform, a terchloride of formyle, which acted more speedily and effectively. From this time chloroform became more generally employed for the production of artificial anæsthesia. Dr. Chapman says, 'Anæsthetic agents should only be administered by those who possess knowledge and experience of their properties. The very essence of anæsthesia consists of a partial arrest of the vital processes, and is, in fact, a stage on the way from life to death; only those agents which are capable of leading us along this solemn path, and which having done so for a certain distance, will allow us to retrace our steps, are really endued with the power of saving us from pain.'

Among the advantages of chloroform over sulphuric ether, as an anæsthetic agent—its perfume is not unpleasant, nor does it exhale in a disagreeable form from the lungs of the patient, as generally happens with sulphuric ether. Being required in much less quantity, it is much more portable and transmissible than sulphuric ether. No special kind of inhaler or instrument is necessary for its exhibition. A little of the liquid diffused upon the interior of a hollow-shaped sponge, or on a pocket-handkerchief, or a piece of linen or paper, or held over the mouth and nostrils so as to be fully inhaled, generally suffices in about a minute or two to produce the desired effect.

Sir James Simpson's special application of the new remedy in child-birth must next be noticed. In early days it was believed that the period of insensibility could not be prolonged with safety. This erroneous belief was speedly dispelled by Simpson, whose most profound compassion had been excited by the sufferings of women in child-birth. These sufferings he determined, if it were possible, to relieve, and on the 19th of January 1847 he for the first time employed ether for this purpose, and with complete success, in a case of unusual

difficulty and severity. Others of like kind followed, and in March he published his first memoirs on the subject. From this time his use of ether in natural labour commenced, and in November 1847 he announced that he had employed it, 'with few and rare exceptions,' for every patient he had attended. 'And I have no doubt whatever,' he adds, 'that some years hence the practice will be general. Obstetricians may oppose it, but I believe our patients themselves will force the use of it on the profession. I have never had the pleasure of watching over a series of better and more rapid recoveries, nor once witnessed any disagreeable result follow to mother or child, while I have now seen an immense amount of maternal pain and agony saved by its employment. And I most conscientiously believe that the proud mission of the physician is distinctly twofold—namely, to alleviate human suffering as well as to preserve human life.'

The physiological effects of the vapours of ether and chloroform are classified by Professor Brande in five definite and progressive stages. 1. In the first stage, which is transient, the patient is exhilarated, but conscious of what is passing before him, able to direct the motions of his limbs, and sensitive to pain. 2. In the second stage, mental functions as well as voluntary movements are performed, but irregularly. The patient knows not where he is; is generally, but not always, ready to do what he is directed. This, according to Dr. Snow, who has investigated the whole subject with great accuracy, is the stage of dreams. 3. It is in the third stage that the mental functions and voluntary movements become dormant, although external impressions may here produce involuntary action. Any pain inflicted in this stage might call forth a groan, but it would not be expressed by articulate words. 4. In the fourth stage no movement besides that occasioned by the snoring of the patient, which indicates him to be in a condition of absolute insensibility. 5. In the fifth stage, which has been witnessed only in the inferior animals, the breathing becomes laboured and irregular, involuntary and voluntary muscles are alike powerless, respiration and circulation successively cease, and death ensues.

The fatal effects of chloroform depend not upon peculiarities in individual constitution, but upon faults in the mode of administration.

Dr. Phipson states of the action of chloroform: 'In the human body exist different systems of nerves, and the art of producing anæsthesia consists in allowing one system to work as usual, while the other systems are under the influence of sleep. The nerves of motion and sensibility are made to sleep, while the nerves of organic life continue their functions. We are now enabled to appreciate these wonderful discoveries, and to admire the marvellous arrangement of the nervous system. The problem of depriving man of sensibility and motion without impeding respiration, circulation, digestion—or, in other terms, of depriving him of his faculty of moving and of feeling pain without depriving him of life—has been solved. During anæsthesia (the sleep of chloroform) man lives like a plant; his animal functions are taken from him for a time.'

Chloroform has been extensively used in every hospital in Europe. It was the greatest boon to our poor wounded in the Crimea and India. The exhaustion of the stock of chloroform in Lucknow was one of the greatest calamities in that fearful siege. No fatal case occurred from its frequent use in the Crimea. Dr. Snow could ascertain but fifty fatal cases throughout the world which could fairly be attributed to chloroform during ten days. For several years before his death he made about 1,000*l.* a-year for administering chloroform in private practice. He met with but one fatal case among the many thousands to whom he administered chloroform. The fatal effect is by paralysing the heart; but the chance of this result, with due care, is very small; indeed, it has been compared with the chance of a fatal railway accident.

The world has as yet seen no discovery comparable in practical value with that of the uses of chloroform; none that has prevented so much agony, none that has saved so much life. The extinction of pain in operative surgery has multiplied a hundredfold the victories of the surgeon over disease—first, because things are practicable now which formerly could not

have been attempted ; secondly, because the knife is no longer regarded as an evil to be dreaded and postponed. It is as the discoverer of the uses of chloroform that Sir James Simpson stands pre-eminent above the men of his time, and has left a deathless name to his posterity.

[See the elaborate paper by Dr. Chapman, reprinted in a separate form ; also, the 'Technical Educator,' published in 1872.]

The effects of chloroform vapour on the Sensitive Plant are very striking ; and it has been used to render bees quiet and innocuous, and while in this state, the honey is taken from them. In swarming, bees have also been rendered manageable by chloroform.

How Humphry Davy First Breathed Laughing Gas.

Davy, who had been articled to a surgeon and apothecary in Penzance, made such progress in medicine, that in the fourth year of his studies, he first experimented on nitrous oxide, or laughing gas ; and his discovery of its wonderful agency was the origin of the researches which established his character as a chemical philosopher. In April 1799 'he first breathed nitrous oxide : ten months of incessant labour were employed in making experiments ; three years in detailing them. The author was under twenty years of age, pupil to a surgeon and apothecary in the most remote town of Cornwall, with little access to philosophical books, and none at all to philosophical men.'

Davy, for his investigation, devised the very beautiful method of procuring the nitrous air, viz., the decomposition by heat of the crystals of nitrate of ammonia, which are thereby dissolved into watery vapour and the desiderated gas. Under the famous name of nitrous oxide, he minutely examined and recorded its properties for the first time. In his 'Researches,' he tells us : 'Having previously closed my nostrils and exhausted my lungs, I breathed four quarts of nitrous oxide from and into a silk bag. The first feelings were similar to giddiness ; but in less than half a minute, the respiration being

continued, they diminished gradually and were succeeded by a sensation analogous to gentle pressure on all the muscles, attended by a highly pleasurable thrilling, particularly in the chest and the extremities. The objects around me became dazzling, and my hearing more acute. Towards the last inspiration, the thrilling increased, and at last an irresistible propensity was indulged in. I recollect but indistinctly what followed; I know that my motions were various and violent. These efforts very soon ceased after respiration; in ten minutes I had recovered my natural state of mind. Almost everyone who has breathed this gas has observed the same thing. On some few, indeed, it has no effect whatever and on others the effects are always painful. The experiment cannot be made with impunity by those who are liable to determination of blood to the head.'

Davy was at first sanguine of the useful application of nitrous oxide to medicine. It might be the notable gold of Geber, the vivifying quintessence of the elements of Raymond Lully, the water of life of Basil Valentine, the elixir of Paracelsus, at least some purified and attempered supporter of vitality, for its composition was almost identical in its ingredients with that of the atmosphere. But Davy soon discovered his mistake, recorded its inutility, and pointed out the fallacies attendant on the trial of so strange and novel a medicinal agent. Nevertheless, in describing its effects, Davy predicted that as 'nitrous oxide, in its extension, seems capable of destroying physical pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place.' Nor was this an accidental conjecture of genius, but the result of ten months' experiments; so that Davy must be acknowledged as the originator of that prolific idea, which as chloroform has become one of the most glorious realities of the present century.

Blanks in Existence.

'Memory,' says Mr. A. Smee, in his work on 'Instinct and Reason,' 'depends upon organisation, and the state of the organ in which it is manifested. A person under the influence of chloroform, ether, or spirituous liquors, remembers nothing which has occurred; hence the two former fluids are frequently used during the performance of surgical operations. A leg may now be removed, a new nose made, or any tedious operation may be performed, without the patient being in the least degree cognisant of the process. Surgeons now constantly employ these remedies. When chloroform is used in sufficient quantity, it induces a state of perfect insensibility. During this state the surgeon performs the operation; and the patient neither winces nor shows the slightest sign of pain, but remains with a placid countenance, as though he were thrown into a gentle sleep. After a short time he suddenly wakes up, rubs his eyes, and stares around him. The interval is a blank in his existence. When all is over, I have frequently heard the patient ask when the surgeon will begin; and he is delighted when he is told that the operation has been completed without his knowledge. The memory of the event is but from the action of ether or chloroform on the blood preventing it from properly acting on the brain.'

In Sir James Simpson's experiments to test the anæsthetic properties of chloroform, it was his custom first to test the safety of a new vapour by inhaling it himself, and then to observe its effects by administering it to his assistants. Mr. Waldie had suggested that the terchloride of formyle might be worthy of a trial; and in the application of this agent, soon and since universally known as chloroform, Dr. Simpson made the great discovery of his life. His work was very materially promoted by the highest personage in the land, who, having sent for him and heard his opinions, and the results of his experience, retained Dr. Snow to officiate as chloroformist at her then pending accouchement. One Edinburgh damsel, when the example set by Her Majesty became known, is said

to have expressed much surprise that the new pain-destroyer 'should hae gotten sae far sooth as London;' but the example, nevertheless, had great weight, and every fresh convert served to spread conviction in ever-widening circles. For many years the use of chloroform has been as customary with the accoucheur as with the surgeon, and it would now be more remarkable that it should be withheld than it should be administered.

Review of Sir James T. Simpson, Bart., Times, May 1872.

Dr. Kidd, treating of chloroform, gives the following 'Medical Experiences of Laughing Gas.'

The nitrogen protoxide, though condemned hastily, has now been given in America, France, and England, in some thirty thousand cases. It indicates that experiments in animals with the 'gas' are only 'part of the truth,' when brought to bear on the idiosyncrasies or fears of hospital patients. In a word, the condition of the system under this 'gas' explains much that was wanting as to whether asphyxia is so dangerous as the advocates of complex inhalers, to prevent cardiac exhaustion from more than three per cent. of vapour, had imagined. Chloroform, as once said of antimony by the good old fathers of the profession, 'is like Scanderbeg's sword, strong or weak —a poison or a great benefit, as it is used'—a worthy medicine, if applied simply. 'While this gas,' from which already two deaths come to us from America, with its alleged advantages, does not seem entirely as great as other revolutions, political or journalistic, of the year last passed, and only an indifferent substitute for the old-fashioned—chloroform. A wide and interesting diversity of opinion exists amongst the ablest physiologist, indeed, as to whether the condition under this gas is one of simple asphyxia, or a form of anæsthesia, with 'deficient oxidation.' Dr. Marcet, Dr. Burdon Saunderson, and others, hold one view. Mr. Coleman, and other practical surgeons like my friend Sir W. Ferguson, still fear the prolonged asphyxia from the gas in long surgical operations; but everything in its future history must depend on whether this is the exact condition, or a modified asphyxia, as I am inclined to think.

SLEEP *and* DREAMS.

Why We Sleep.

The amount of healthy, ordinary Sleep each day is in proportion to the amount of healthy 'wear and tear' of the system, and the absence of emotional excitement; for something in the shape of good news, as well as of bad news, will keep the mind uneasy and awake. Thus, a traveller who is to be up early in the morning to catch an early train will wake to the moment; in fact, he has been scarcely asleep at all—emotion of some sort or another has destroyed complete sleep. The condition of the emotions and the state of the pulse of criminals before execution is also well known. Starvation is another cause of want of sleep, as there has been no exercise or wear and tear of muscle. We have all these conditions in hospital patients under chloroform. Of the new world revealed by sleep, poets of all ages have written, of course, a great deal; but we are more interested with the fact that this emotion, or nervous irritability, especially in female patients, which destroys natural sleep, also involves an increase of chloroform to produce anæsthesia. Wordsworth remarks that twilight has the power of removing, softening, harmonising, or rendering abstract certain things otherwise lost in the bustle or blaze of the mid-day sunshine; so it strikes me is sleep; it removes some objects, and makes others more clear—it leaves out a great deal of what is known to us as association of every-day ideas, and introduces us to a world of 'innate ideas' and new but useless fancies, and new illusions. Chloroform patients sing songs, under chloroform, they never knew before, &c.

Dr. Kidd's Lectures on Chloroform.

As to the Rules of Sleep: 1st, Those who think most, who

do most brain work, require most sleep. 2nd, That time 'saved' from necessary sleep is infallibly destructive to mind, body, and estate. Give yourself, your children, your servants —give all that are under you—the fullest amount of sleep they will take, by compelling them to go to bed at some regular, early hour, and to rise in the morning the moment they awake; and within a fortnight, nature, with almost the regularity of the rising sun, will unloose the bonds of sleep the moment enough repose has been secured for the wants of the system. This is the only safe and sufficient rule; and as to the question how much sleep any one requires, each must be a rule for himself.

Causes of Trance.

Dr. Sir Henry Holland, in his 'Medical Notes,' observes that, 'as respects magnetic sleep or trance in all its alleged shapes, there is no well authenticated fact making it needful to believe that an influence is received from without, beyond those impressions on the senses which are capable, according to the temperament and other circumstances of existing disordered as well as healthy actions, throughout every part of the nervous system, and especially in the sensorial functions.'

Morning Dreams.

The old notion of the 'Somnia vera' of approaching day—'Morning dreams come true,' is interpreted by the physical state of sleep being then less perfect: trains of thought suggested follow more nearly the course of waking associations, and the memory retains them; while earlier and more confused dreams are wholly lost to the mind.

There is no fact more clearly established in the physiology of man than this, that the brain expands its energies and itself during the hours of wakefulness, and that these are recuperated during sleep. If the recuperation does not equal the expenditure, the brain withers—this is insanity. Thus it is that, in early English history, persons condemned to death by being prevented from sleeping, always died raving maniacs; thus it

is also that those who are starved to death become insane—the brain is not nourished, and they cannot sleep.

Nature of Sleep.

We catch glimpses of its nature at the moment of falling asleep and waking. When it is the usual time for sleep, if our attention happens to be livelily excited, it is in vain we court sleep. When we are striving to contend against the sense of overwhelming fatigue, what we feel is that we can no longer command our attention. Then we are lost, or are asleep. Then the head and body drop forwards; we have ceased to attend to the maintenance of our equilibrium. Any iteration of gentle impressions, enough to divert attention from other objects, without arousing it, promote sleep. Thus we recognise as the psychical basis of sleep the suspension of the attention. Are any other mental faculties suspended in sleep? Sensation and the influence of the will over the muscular system are not. For our dreams are liable to be shaped by what we hear. The sleeper without waking will turn away his head from a bright light; will withdraw his arm if you pinch it; will utter aloud words which he dreams he is employing. The seeming insensibility in sleep, the apparent suspension of the influence of the will, are simply consequences of the suspension of attention.

Letters by H. Mayo, M.D.

Sleep is death's younger brother, and so like him that I never dare trust him without my prayers.

We term sleep a death, and yet 'tis waking that kills us, and destroys those spirits that are the house of life. 'Tis indeed a part of life that best expresseth death; for every man truly lives as long as he acts his nature, or some way makes good the faculties of himself. Themistocles, therefore, that slew his soldier in his sleep, was a merciful executioner; 'tis a kind of punishment the mildness of no laws hath invented.

Sir Thomas Browne.

Dreams Contradict Waking Thoughts.

As a general rule, our dreams are *symptomatic* of our principles and characters. The most affectionate of mothers will dream of murdering their children. A veteran, who, during the Peninsular war, had done great exploits in ten pitched battles, and who had thrice volunteered into the *forlorn hope*, told one that, when, for relieving the tedium of the march, or the weariness of the night by the camp fire, they would tell one another of their dreams; these dreams were almost always in the inverse ratio, in respect of the cowardice or bravery of the conduct of the different parties on the field of battle. As for himself, he was always dreaming of running away home to his mother. Nevertheless, suppose you dream of doing some wicked thing, and *sleep on* soundly, without any sensation of remorse: or, suppose you dream of the blessed hope—the coming of our Lord—and feel nothing but dismay, and awake trembling with horror; well, in either case, I will not say, it is *certainly* a bad sign of your spiritual condition; but I must say, that it does not look fair; and that you would do well to examine yourself strictly of your waking principles. I knew one, who was an ardent theoretic millennarian. He dreamed of the advent, and awoke in agony. Something must be far wrong he concluded. On reflection and self-examination, he detected that, notwithstanding all his vehement pleading for the doctrine of the speedy coming, he was worldly, covetous, and spiritually inactive; and even guilty of prostituting the blessed hope in defence of the inactivity. He repented, and became distinguished for his liberality and well-doing. Years afterwards, he dreamed again; and, immediately on seeing the vision of glory, felt himself to be blissfully transformed. When he awoke, I am in a right way of preparation for the advent now, was his reflection; I will keep in it. So he abounded in well-doing more and more; till he died triumphing in the hope that he would soon share in the glory of the first resurrection.

Sleep of 'Guilty Creatures.'

It is not uncommon to hear persons attribute the sleeping of 'guilty creatures' to hardness of heart, or recklessness. This is an error, referable to ignorance of the nature of sleep, and of the fact 'that all degrees of excitement in the parts of the brain and spinal marrow, associated with the nerves of the sensitive system, are followed by proportional exhaustion. The only limit to this law is the capability of bearing in those parts. Exhausted by mental excitement, the criminal is often awakened for his execution; and the soldier, both by mental and bodily excitement, sleeps by the roaring cannon.

Dr. Philip.

Positions in Sleeping.

The Hindoos believe that to sleep with the head to the north will cause one's days to be shortened; to the south will bring longevity; to the east riches; and to the west change of scene. Some superstitious persons in England object to their bedsteads being placed parallel to the planks of the floor, considering it unlucky to sleep across the boards.

Now, it is objected that the Hindoo superstition referring to the point of the compass towards which the head should lie, is opposed to a modern theory which professes to be based on scientific principles. There is more reason to the objection to sleeping across the boards. In London, owing to the Building Act, the all but universal practice is to run the joists from front to back of a house, so that the floor boards run across the house, parallel with the street, and he who sleeps 'across the boards' necessarily sleeps with his face to the window, and will have the full glare of the morning light.

Some years ago, it was announced to the Scottish Curative Mesmeric Association, that persons wishing to secure sleep should lie with their heads to the north, and not on any account with their heads to the west. A physician at Magdeburg, Dr. Julius von dem Fischweiler, asserts in his will, that his own great age (109) was entirely to be ascribed to

his constant habit of sleeping with his head towards the north; and the rest of his body in a direction coinciding as closely as possible with that of the meridian—that is, with his heels to the south. From persisting in this habit, the learned doctor considered that the iron contained in our system, finding itself in the direction of the magnetic currents, which are continually flowing over the surface of the globe towards the north pole, becomes magnetised, and thus increases the energy of the vital principle. Still there is this condition: 'Let the body incline as often as possible during the day quite flat on the ground,'—a rule of difficult observance in every-day life.

An eminent physician in Scotland states, that when he failed by every other prescription to bring sleep to invalid children, he recommended their couches or little beds to be turned due north and south, the head of the child being placed towards the north; he had never failed by this process to induce sleep. This prescription is simply an application of the *Od* or *Odylic* farce, which Baron Reichenbach wrote some four-and-twenty years ago.

Cabanis, in his investigations on the mind, says Dr. Millingen, has endeavoured to fix the order in which the different parts of our organisation go to sleep, namely, first, the legs and arms, then the muscles that support the head and back. The first sense that slumbers is that of sight, followed in regular succession by the sense of taste, smell, hearing, and feeling. The viscera he says, fall asleep one after the other, but with different degrees of soundness.

It having lately been ascertained that the position of the bedstead has much to do with avoiding sleepless nights, the above question has been thus answered by a Correspondent of the 'Builder':—

'Years ago I suffered much from nervous irritation, and consequent loss of sleep. I fancied that I slept better in certain rooms than others; and, after trying to ascertain why, came to the conclusion that a great deal depended upon the position of the bed.

'For twenty-five years and upwards I have had my bed placed

with the head to the north, or as near that point as I can; and if I cannot have it north, I place it north-east, with as much north as I can get. When I sleep from home, I pull out the bedstead from the wall and turn it to the desired point as nearly as I can, finding great advantage. Many of my friends, knowing my fancy, take care to put me in a room with the bed in the right position. They smile at my whim: I sleep, and smile at their unbelief.'

Another Correspondent of the 'Builder' states:—'So far as my own observations have gone, I know that my sleep is always more sound and refreshing when my head is placed to the north. There are persons whom I know, the head of whose beds is to the north, and who, in order to wake early, will reverse their usual position in the bed, but without knowing the reason why, beyond "that they could always wake earlier," the rest (sleep) being more broken. I have it related to me that at a military hospital in Russia, there were some sick patients, of highly sensitive natures, and who were rapidly recovering. When necessity compelled them to be removed to another wing of the building they did not get on so well; in fact, prostration seemed to be setting it; and it was found advisable to get them back to their former wards as quickly as possible, where the heads of the beds were to the north. I have heard of horses going blind through changing their position from north to south, to that of west to east. Certainly, longevity can be attained by this means; but it must be combined with healthful living, proper rest, and exercise of both mind and body.'

Galen, who, in the decline of life suffered from wakefulness, found much comfort in eating a lettuce in the evening; and every one who has indulged in the same luxury must have experienced the soporific effects of this plant. Among the fables of antiquity, we read of Venus, after the death of Adonis, throwing herself on a bed of lettuces, to soothe her grief.

M. Sommer propounds a new theory of sleep: his idea is that sleep is simply a result of the deoxygenation of the system, and he believes that sleepiness comes on as soon as the oxygen stored in the blood is exhausted.

What is Hypnology?

Some thirty years ago, there lived in Regent Street, London, Mr. Gardner, a practitioner of 'Hypnology, or Sleep at will,' or sound and refreshing sleep. Mr. Gardner was found dead in his bed after a few days' illness. Dr. Burke gave it as his opinion, that death was produced by a deficiency of vital power in the brain. Mr. Gardner was a native of Ireland: those only to whom his mystery was unfolded by the professor himself, can judge of the effect produced, as they were invariably enjoined to secrecy.

Sleep-Walking.

Somnambulism, or walking in the sleep, appears to differ from dreaming chiefly in the degree in which the bodily functions are affected. The mind is fixed in the same manner as in dreaming, upon its own impressions, as possessing a real and present existence in external things; but the bodily organs are more under the control of the will, so that the individual acts under the influence of his erroneous conceptions, and holds conversations in regard to them. He is also, to a certain degree, susceptible of impressions from without through his organs of sense; not, however, so as to correct his erroneous impressions, but rather to be mixed up with them; and a variety of remarkable phenomena arise out of these peculiarities.—*Dr. Abercrombie.*

It is from remembering the action of a dream as long as the dream lasts, that somnambulists generally meet with no accidents in ascending to perilous situations during their sleep. The surrounding localities are so correctly presented to the mind, that the person ascends with safety to the roofs of houses, or crosses torrents and bridges, which during the waking state he would be afraid to do; the passion of fear being destroyed by sleep. The perilous situations of somnambulists have formed the wonder and admiration of gazing multitudes; and the mind of the vulgar has been impressed with the importance

of leaving the sleep-wanderer to his own guidance, where a mistake in his footing of the twentieth part of an inch, would have plunged him into eternity.

It should be recollected that the somnambulist is limited in all he does, during this state, to the ideas which are furnished by the dream, under the impressions of which he acts. His mind, it should be seen, and his organs of sense generally, are likewise limited to these impressions.

Langston Parker.

Sir William Hamilton, in his 'Lectures on Metaphysics,' on the authority of Jemker, a celebrated physician and professor of Halle, relates the following of a postman, whose daily journey lay between Halle and a town some eight miles distant, a considerable part of which was unenclosed champaign meadow land. In walking over this smooth surface, the postman was generally asleep: but at the termination of this part of his road, there was a narrow foot-bridge over a stream; and to reach this bridge it was necessary to ascend some broken steps. Now it was ascertained, as completely as any fact of the kind could be, (1) that the postman was asleep in passing over this level course; (2) that he held on his way in this state without deflection towards the bridge; and (3) that just before arriving at the bridge, he awoke. This case, besides showing that the mind must be active though the body is asleep, shows also that certain bodily functions may be dormant while others are alert. The locomotive faculty was here in exercise while the senses were in slumber.

This suggests another example found in a story told by Erasmus in one of his letters, concerning his learned friend Oporinus, the celebrated professor and printer of Basle. Oporinus was on a journey with a bookseller, and on their road they had fallen in with a manuscript. Tired with their day's travelling—travelling was then almost exclusively performed on horseback—they came at nightfall to their inn. They were, however, curious to ascertain the contents of their manuscript; and Oporinus undertook the task of reading it aloud. This he continued for some time, when the bookseller found it necessary to put a question concerning a word which he had not rightly

understood. It was now discovered that Oporinus was asleep; and being awakened by his companion, he found that he had no recollection of what for a considerable time he had been reading. This is a case concurring with a thousand others to prove: (1) that one bodily sense or function may be asleep while another is awake; and (2) that the mind may be in a certain state of activity during sleep, and no memory of that activity remain after the sleep has ceased. The first is evident; for Oporinus, while reading, must have had his eyes and the muscles of his tongue and fauces awake, though his ears and other senses were asleep. And the second is no less so; for the act of reading supposed a very complex series of mental energies. Physiologists have observed, that our bodily senses and powers do not fall asleep simultaneously, but in a certain succession. We all know that the first symptom of slumber is the relaxation of the eyelids; whereas hearing continues alert for a season after the power of vision has been dormant. In the case last alluded to, this order was, however, violated; and the sight was forcibly kept awake while the hearing had lapsed into torpidity.

Sleeping with the Eyes Open.

There are some persons who sleep with their eyes open; and a man may stand before another man in such a situation, with a lighted candle in his hand, so that the image of that person who has the light may be vividly depicted on the retina of the sleeping man. But does he see? is he sensible of it? No. This has been magnified into a wonder; whereas it only proves what Dr. Darwin long since asserted—that sensation does not depend upon impressions made upon the nerves, but upon actions excited in them. Arouse the slumberer, awake him that sleepeth, bring out the natural excitement into his nerves and muscles, and he would exclaim, 'God bless me! how came you here at this time of night?'

Abernethy.

On Dreams.

Sir Thomas Browne, in 'A Letter to a Friend,' has this passage on Dreams: 'Some dreams I confess may admit of easy and feminine exposition: he who dreamed that he could not see his right shoulder, might easily fear to lose the sight of his right eye; he that before a journey dreamed that his feet were cut off, had a plain warning not to undertake his intended journey. But why to dream of lettuce should presage some ensuing disease, why to eat figs should satisfy foolish talk, why to eat eggs great trouble, and to dream of blindness should be so highly commended, according to the oneirocritical verses of Astrampsychus and Nicephorus, I will leave unto your divination.'

Modification of Sleep.

Sleep is much modified more by habit than we are generally disposed to allow. Thus, an old artilleryman often enjoys tranquil repose, while the cannon are thundering around him; an engineer has been known to fall asleep within a boiler, while his fellows were beating it on the outside with their ponderous hammers; and the repose of a miller is nowise incommoded by the noise of his mill. Sound ceases to be a stimulus to such men, and what would have proved an inexpressible annoyance to others, is by them altogether unheeded. It is common for carriers to sleep on horseback, and coachmen on their coaches. During the battle of the Nile, some boys were so exhausted, that they fell asleep on the deck amid the deafening thunder of that dreadful engagement. Nay, silence itself may become a stimulus, while sound ceases to be so. Thus, a miller being very ill, his mill was stopped that he might not be disturbed by its noise; but this, so far from inducing sleep, prevented it altogether; and it did not take place till the mill was set a-going again. For the same reason, the manager of some vast iron works, who slept close to them amid the incessant din of hammers, forges, and blast furnaces, would awake if there was any cessation of the noise during the night. To carry the

illustration still farther, it has been noticed, that a person who falls asleep near a church, the bell of which is ringing, may hear the sound during the whole of his slumber, and be nevertheless aroused by its sudden cessation. Here the sleep must have been imperfect, otherwise he would have been insensible to the sound: the noise of the bell was no stimulus; it was its cessation which, by breaking the monotony, became so, and caused the sleeper to awake.

Macnish's Philosophy of Sleep.

'A friend of mine,' said Erskine, 'was suffering from a continual wakefulness, and various methods were tried to send him to sleep, but in vain. At last, his physicians resorted to an experiment which succeeded perfectly: they dressed him in a watchman's coat, put a lantern into his hand, placed him in a sentry-box, and—he was asleep in ten minutes.'

Trying to get to Sleep,

Or great anxiety to bring on sleep, is more or less its preventive; the disengagement of the mind from any strong emotion, or urgent train of thought, being the most needful condition for attaining sleep. This anxiety, or a desire to sleep, as a mental disquiet, will only add to the general disquiet which has produced it. The motions of the mind must be as quiescent as those of the body; and the will, instead of commanding or interfering, must tranquilly resign itself to the general intention.

Sir Henry Holland, in his 'Medical Notes,' observes: 'The various artifices of thought and memory used for the purpose often fail from the cause. When they succeed, it depends upon the exhaustion being more complete, or the mind being rapidly carried from one object to another; a desultory state of this kind, without emotion, being apparently one of the conditions most favourable to the effect desired. The close dependence of sleep on the state of the alimentary canal, makes it probable that evil is often incurred by giving purgatives habitually at bedtime. The case is a common one, and not least so in dyspeptic cases. Yet here especially, everything ought to

be avoided which by irritation can disturb the soundness of rest.'

Mr. Alfred Smee, the well-known surgeon, has found the application of cold produce refreshing sleep, while all other medicaments have failed or been impracticable; and many a time he has assuaged a sufferer's pain, by applying a little cold water to the top of the brain, and has thus obtained for him rest, when every other means has failed. Mr. Smee also observes: 'We have some voluntary power of being able to get to sleep. We perhaps lower the action of the heart, and the temperature of the body, when sleep takes place, and do not again awake until some unusual impression excites the biodynamic circuit to awake, or the excitability becomes so exalted, as to allow weaker impressions to have the same effect.'

Elements of Electro-Biology.

How the Biologist Induces and Determines Sleep.

It is well known that the expectation of sleep is one of the most powerful means of inducing it, especially when combined with the withdrawal of the mind from everything else which could keep its attention awake. Now the mind of the biologised subject has been possessed with the conviction that sleep is about to supervene, and is closed to every source of distraction. The waking at a particular time may also be explained by the influence of expectation. These phenomena are essentially conformable to facts whose genuineness every physiologist and psychologist is ready to admit. It is not, however, in any large proportion of individuals that this state can be induced; probably not more than one in twenty, or at most one in twelve.

There is one phenomenon of the biological state which has been considered pre-eminently to indicate the power of the operator's will over his subject, namely, the induction of sleep, and its spontaneous determination at a given time previously obtained, or by the sound of the operator's voice, and that only.

Prescriptive Dreams.

Dreams have been considered as prescriptive in various diseases. Diodorus Siculus relates that a certain Scythian dreamed that Æsculapius had drawn the humours of his body to one place or head, to have it lanced. When Galen had an inflammation of the diaphragm, we are told that he was directed in a dream to open a vein between the thumb and the fourth finger—an operation which restored him to health. Marcus Antonius asserted that he learned in his dreams, various remedies for spitting of blood. It is related of Sir Christopher Wren, that, when at Paris, in 1761, being 'disordered with a pain in his reins,' he sent for a physician, who prescribed blood-letting: but he deferred to submitting to it, and dreamed that very night that he was in a place where palm-trees grew, and that a woman in a romantic habit offered dates to him. The next day he sent for dates, which cured him. Now, although this cure, brought about by a dream, was considered wonderful, its circumstances offer nothing supernatural. It is more than probable that Sir Christopher had frequently read in foreign works on the disease, that dates were recommended as an efficacious remedy in nephritic complaints; and moreover met, in his daily perambulations, female quacks, who exhibit themselves to this day in the French metropolis, fantastically dressed, and vending their far-famed nostrums. That he should have remembered dates, and that the phantasm of the she-mountebank might at the same time have struck his fancy, were two associations by no means improbable.

Probably, all the strange stories of prophetic dreams might be traced to a similar connection of ideas. It has been observed that dreams do not always assume their complexion from recent occurrences, and our bodily sufferings, during sleep, bring to our recollection every circumstance that regards the malady. A patient who had a bottle of hot water placed at his feet, dreamed that he was walking in great agony in the burning lava of Vesuvius. Similar associations exist when awake, the man whose arm has been amputated constantly refers the pain he experiences to the lost hand, or to that part of

the limb which received the injury; and the very same nervous illusion prevails during slumber.

Dr. Milligen's Curiosities of Medical Experience.

Traces of Dreams.

Sir Henry Holland observes, 'There are few who have not occasionally felt certain vague and fleeting impressions of a past state of mind, of which the recollection cannot, by any effort, take a firm hold, or attach them to any distinct points of time or place; something which does not link itself to any part of life, yet is felt to belong to the identity of the being. These are not improbably the shades of former dreams: the consciousness, from some casual association wandering back into that strange world of thoughts and feelings in which it has existed during some antecedent time of sleep, without memory of it at the moment, or in the interval since.

Medical Notes.

Violation of a Grave.

The legal proceedings which took place about ten years ago, in the Sheriff Court of Clackmannanshire with regard to the violation of a grave in the churchyard at Alloa, and the unwarrantable exhumation of the body of James Quin, had their origin, it is stated, in a remarkable dream of the mother of the deceased. Young Quin died in September, 1863, and was buried in a lair in the churchyard, which was purchased by his father from William Donaldson, the kirk treasurer, it being agreed that the price was to be paid by instalments. About six months afterwards Robert Blair, the sexton or gravedigger, took upon himself (without the authority, it would appear, of Donaldson) to sell the same lair to another person, and to inter therein a relative of the new purchaser, without, however, at that time exhuming the body of Quin, the former tenant. Some considerable time after this the mother of Quin, being desirous of erecting a headstone on the grave of her son, made some inquiries with that view, in the course of which she heard

something of another person having been buried in his grave, this having, as she stated, been 'cast up,' by Blair's nephew to a younger son of hers on their way from the Sunday school. But the gravedigger denied the truth of this story, and managed to pacify her. Feeling, however, that he had got into a scrape by the lair having been resold, he, some weeks after Mrs. Quin had interrogated him on the subject, dug up the body of her son during the night of Thursday, the 23rd of March last, and re-interred it in other ground. Now, on that very Thursday night, as sworn to by Mrs. Quin at the trial, she had this remarkable dream :—She dreamt that her boy stood in his night-gown at her bed-side, and said to her, 'Oh, mother, put me back to my own bed.' She then awoke her husband, and, forgetting in her half-dreaming state that her son was dead, said to him, 'Jimmie is out of his bed; put him back into it,' after which she fell asleep, and again had the same dream. A third time during the same night she dreamt that her son was standing beside her bed; but on this occasion, remembering that he was dead, the figure of the gravedigger was mixed up with that of the boy, and he appeared to be shoving his spade into the body. Awakening in great trepidation, and feeling certain that her boy had been taken out of his grave, she went to the gravedigger and vehemently accused him of having dug up the body, which, after some prevarication, he at last admitted. Hence arose the action of damages against Donaldson, the kirk treasurer, and Blair, the gravedigger, which being restricted to 12*l.*, was brought in the Small Debt Court. The sheriff, after a long proof, assoilzied Donaldson, and found Blair liable in damages, which, the parties not having settled the same extrajudicially, have been since assessed at 5*l.*

Scotsman.

Curiosities of Dreams.

In an able review of Mr. Seafield's interesting 'Literature of Dreams,' the *Athenæum* has selected the following instances. In the life of Sir Thomas More we read:

'Sir Thomas More's mother saw in her sleep the number of children she should have, written as it were in her marriage

ring; and the forms, shapes, and countenances of them all. One was very dim and obscure, and could scarcely be discerned; for of one she suffered by an untimely birth—an abortsement. Another she saw full, bright, and beautiful, and fairer than all the rest; whereby, no doubt, was this lamp of England prefigured.'

A very similar incident is related of Mrs. Abbott by Aubrey. 'When Archbishop Abbott's mother (a poor cloth-worker's wife in Gilford),' says the old gossip, 'was with child of him, she did long for a jack, and she dreamt that if she should eat a jack, the son who was about to be born would be a great man. She arose early the next morning, and went with her pail to the river-side (which runneth by the house, now [1696] an alehouse, the sign of the 'Three Mariners') to take up some water, and in the water in the pail she found a good jack, which she dressed, and ate it all, or very near. Several of the best inhabitants of Gilford were invited (or invited themselves) to the christening of the child. It was bred up a scholar in the town, and by degrees came to be Archbishop of Canterbury.'

Peter Sterry, says Nash, in a note to a famous passage in his edition of 'Hudibras,' dreamed that 'Oliver Cromwell was to be placed in heaven, which he foolishly imagined to be the true and real heaven above; but it happened to be the false, carnal heaven at the end of Westminster Hall, where his head was fixed after the Restoration. There were, at that time, two victualling-houses at the end of Westminster Hall, under the Exchequer, the one called Heaven, and the other Hell. Near to the former Oliver's head was fixed, January 30, 1660–1.' Pepys mentions a case in which a Mrs. Llewellen dreamed that her uncle Scobell would die in four days, and the gentleman was good enough to do so. Aubrey has a string of such marvels, which are amusing, if they are nothing more. He says:—

'When Dr. Harvey, one of the Physicians' College in London, being a young man, went to travel towards Padua, he went to Dover, with several others, and showed his pass, as the rest did, to the Governor there. The Governor told him that he must not go, but he must keep him prisoner. The Doctor

desired to know "for what reason? how he had transgressed?" "Well, it was his will to have it so." The pacquet-boat hoisted sail in the evening, which was very clear, and the Doctor's companions in it. There ensued a terrible storm, and the pacquet-boat and all the passengers were drowned. The next day the sad news was brought to Dover. The doctor was unknown to the Governor, both by name and face; but the night before the Governor had a perfect vision in a dream of Dr. Harvey, who came to pass over to Calais; and that he had a warning to stop him. This the Governor told to the Doctor the next day. The Doctor was a pious, good man, and has several times directed this story to some of my acquaintance. My Lady Seymour dreamed that she saw a nest, with nine finches in it. And so many children she had by the Earl of Winchelsey, whose name is Finch. The Countess of Cork (now Burlington) being at Dublin, dreamed that her father, the Earl of Cumberland, who was then at York, was dead. He died at that time.'

The most curious of these stories is one which Aubrey says was told him by William Penn. The English fleet was then at sea, fighting against the Dutch. Sir William Penn, the great admiral, was on board, though the chief command was in the hands of the three sea-generals, Blake, Deane, and Monk. Lady Penn took her son William to pay a visit to Mrs. Deane, the sea-general's wife, who at that time resided in Petty France, and on the ladies falling into talk about the fleet, Mrs. Deane told her visitor that she had been troubled by a dream, in which she saw her husband walking on the deck, when a cannon-shot struck his arm and drove it into his side. Within forty-eight hours, says Aubrey, she received news of a great battle, in which her husband was certainly killed in the manner which she had seen in her vision.

Bishop Burnet has told, on the authority of Lord Rochester, the singular story of Lady Warre's chaplain. 'Lord Rochester,' says Gilbert Burnet, in 'Some Passages of the Life and Death of John, Earl of Rochester,' 'told me of an odd presage that one had of his approaching death in the Lady Warre, his mother-in-law's house. The chaplain had dreamt that such a

day he should die; but being by all the family put out of the belief of it, he had almost forgot it, till the evening before at supper, there being thirteen at table, according to a fond conceit that one of these must soon die, one of the young ladies pointed to him, that he was to die. He, remembering his dream, fell into some disorder, and the Lady Warre, reproving him for his superstition, he said he was confident he was to die before morning; but he being in perfect health, it was not much minded. It was Saturday night, and he was to preach the next day. He went to his chamber and sat up late, as appeared by the burning of his candle, and he had been preparing his notes for his sermon; but he was found dead in his bed the next morning. These things, he said, made him inclined to believe the soul was a substance distinct from matter; and this often returned into his thoughts.'

Some experiments, made with a view to induce dreaming under conditions in which the results could be noted, were made on the person of M. Maury. While M. Maury was asleep, his external organs were subjected to various kinds of irritation. Thus: 1. His lips and nose being tickled by his coadjutor with a feather, he dreamed that he was subjected to horrible tortures; that a pitch-plaster was applied to his face, which was then roughly withdrawn, denuding the lips and cheeks. 2. A pair of tweezers being struck close to his ears by scissors, he dreamt that he heard the ringing of bells, which speedily passed into the tocsin, and suggested June, 1848. 3. Being made to smell eau de Cologne, he dreamed that he was in the shop of a perfumer, which led the fancy to the East, and to the shop of Jean Farina, in Cairo! 4. Being made to feel the heat and smell of a burning match, and the wind at the time whistled through the shutters, he dreamed that he was at sea, and that the powder room of the vessel blew up. 5. His neck being slightly pinched, he dreamed that a blister was applied; and then there arose the recollection of a physician who had treated him in youth. 6. A piece of red-hot iron being held close to his face for such a length of time as to communicate a slight heat, he dreamed of bandits who got into houses and applied hot irons to the feet of the inhabitants, in order to

extract money from them. This idea suggested that of the Duchess d'Abrantes, who he conceived had chosen him as secretary, in whose Memoirs he had read of chauffeurs, or bandits who burned people. 7. The word 'parafaramus' being pronounced close to his ears, he heard nothing; but on a repetition of the attempt while in bed, the word 'maman' was followed only by a dream of the hum of bees. When the experiment was repeated some days subsequently, and when he was falling asleep, he dreamed of two of three words, 'Azor, Castor, Leonore,' which were attributed to the interlocutors in his dream. The sound of 'chandelle, haridelle,' awoke him while pronouncing the words 'c'est elle,' but without any recollection of the idea attached to the expression. 8. A drop of water falling on the brow suggested a dream of Italy, great thirst, and a draft of Orvietto. 9. A light, surrounded by a red paper, being repeatedly passed before his eyes, he dreamed of a storm of lightning, which reproduced a violent tempest which he had encountered between Morlaix and Havre.

Footsteps of Spirits.—Assassination of Perceval.

Among dreams apparently designed to communicate a warning of danger, there is none better known or perhaps better attested, than the dream of Mr. Williams of Scorrier House, Cornwall, which Dr. Abercrombie, in his work 'On the Intellectual Powers,' gives the story as he obtained it direct from Mr. Williams, through the intervention of a common friend. About eight days before the assassination of Mr. Perceval, Chancellor of the Exchequer, by Bellingham, Mr. Williams, who had no personal acquaintance with the Chancellor, dreamed in his own house in Cornwall that he saw a little man enter the lobby of the House of Commons dressed in a particular way, and that presently another man, whose dress Mr. Williams also minutely observed, drew a pistol from under his coat, and fired it at the little man, who instantly fell. The arrest of the murderer was also witnessed by Mr. Williams, and he was informed, in his dream, by some of the bystanders, of the name of the little man who had fallen. He dreamed it

thrice the same night. His wife made light of it the first time; but after its third occurrence, Mr. Williams seriously thought of giving intimation of it to Mr. Perceval. His friends, however, dissuaded him from it, as likely to end in his being laughed at as a fanatic. On the morning of the tenth day after, the news of the assassination reached Cornwall; that is, two days after the event had happened in London. Mr. Williams soon after recognised in the print-shops the portraits of those chiefly concerned, and their costume, which were precisely as he had dreamed them.

Dr. Carlyon of Truro, an intimate friend of Mr. Williams, had often heard him circumstantially relate the dream and its fulfilment in Dr. Carlyon's early years and late recollections, which account agrees in nearly every particular with Dr. Abercrombie's narrative, and a MS. account shown to Dr. Carlyon by Mr. Hill. The strangest circumstance of all about this story is that Bishop Baines had a similar dream of Mr. Perceval's assassination, and told some friends of it before the event.

Presentiments of the Assassination of Henry IV. of France.

In the morning of the day on which Henry the Fourth was murdered by Ravaillac—Friday, May 14, 1610—he was exceedingly pensive. In the hope of composing his spirits he threw himself on his bed, but was unable to rest. Thrice he rose, and thrice he fell on his knees in prayer. Soon after, repairing to the presence-chamber, his attendants endeavoured to divert the melancholy which preyed so deeply on his mind. Being naturally amiable and cheerful he tried to fall in with the well-meant pleasantry of his nobles, and attempted to smile, but concluded thus, 'We have laughed enough for Friday; there will be weeping on Sunday.' His Queen, Marie de Medicis, had been crowned but the day before. La Brosse, a physician, is, by some, reported to have said to the Duke de Vendome on that evening, 'If the King survives a danger which threatens him at present, he will live these thirty years.' The Duke entreated the King to grant this physician an audience,

and repeated what the old gentleman had been saying. His Majesty, with unusual asperity and hastiness, replied, 'He is an old fool for telling you such things, and you are a young one if you believe him.' The Duke's rejoinder was given, respectfully and sensibly, 'Sire, one may not believe such things, but one may fear them.' Bayle, however, has endeavoured to shake the credit of this whole story. The same day, as the King and Queen were walking through an apartment of the palace, the King stopped to speak with somebody present. The Queen stopping at the same time, he said to her, as by a spirit of involuntary prophecy, 'Go on, go on, Madame the Regent.' A few nights before the catastrophe the Queen dreamed that all the jewels in her crown were changed into pearls, and that she was told pearls were significant of tears. Another night she started and cried out in her sleep, and waked the King, who asking her what was the matter, she answered, 'I have had a frightful dream; but I know that dreams are mere illusions.' 'I was always of the same opinion,' said Henry, 'however, tell me what your dream was?' 'I dreamed,' continued she, 'that you were stabbed with a knife under the short ribs.' 'Thank God,' added the King, 'it was but a dream.' On the morning of the fatal day his majesty was, as we have before observed, unusually low. More than once he said to those about him, 'Something or other hangs very heavy on my heart.' Before he entered his carriage he took leave of the Queen no fewer than three times, and had not passed through many streets ere Ravaillac gave him that fatal thrust which deprived France of one of the most humane sovereigns she ever had.

Dreams and their Interpretations.

In all rude countries, and amongst all rude people, the interpretation of dreams is a favourite amusement with the populace. From the king on his throne to the cowherd following his cattle, all are ready to flatter themselves in consequence of fortunate or lucky dreams, and to terrify themselves in consequence of unfortunate or unlucky dreams. In the East, from the earliest times, the interpretation of dreams has been held to be

a science, and certain men have been supposed to be particularly gifted in this way. Dreams of an extraordinary or portentous character have been looked upon as direct emanations from the gods, from the time when men first began to think—from Greece to China, at least, in extent of longitude. The Brahmans of India have hundreds of volumes on the art of interpreting dreams, and the Muhammedans of India have scores of them. As my object is rather to illustrate popular life in the villages of Oudh than to give any account of the dreams of the learned, I simply note down here a few rules for the interpretation of dreams, which I find prevalent amongst the unlearned—rules handed down by tradition rather than in formal works, and which doubtless vary in character and detail at various times and in various districts. 1. To dream of imprisonment, for instance, is a sure sign of a burial or burning of the dead, soon to take place. It does not necessarily imply that the death should be that of a member of the family of the dreamer: but it is most likely.—2. To dream of the birth of a son is a sure sign of the birth of a daughter, either in the family itself or amongst its distant relations.—3. To dream of the birth of a daughter, again, denotes impending misfortune of some kind, certain to come on the household soon.—4. To dream of eating delicious food indicates that some good fortune will speedily make its appearance.—5. To dream of eating figs or pomegranates shows that there will soon be need of repentance—the crime may already have been committed; if so, arise and repent at once, O dreamer of eating figs or pomegranates.—6. To dream of the tumbling down of a house, or a hole in the roof, or any extensive injury to it, indicates the death of, or some great injury to, its master.—7. To dream of the earth, of growing corn, or good crops, or satisfactory tillage, indicates a happy marriage.—8. On the other hand, to dream of bad crops, corn being cut down, or unsatisfactory tillage, foreshadows the unfaithfulness of one's spouse. 'Nothing can be more certain than these two,' said an intelligent Brahman to me, referring to Nos. 7 and 8.—9. Dreaming of a journey is indicative of restlessness, commotion, disturbance, or perturbation of some kind. It may be false or true, well founded or without foun-

dation.—10. To dream of a fight, indicates approaching sickness—and, in the same way, to dream that one has been the subject of abuse, indicates that sickness is drawing near the household.—11. To dream of blood or bleeding, shows that some important contract is about being concluded, either by one's self, or by others, affecting the dreamer's fortune.—12. To dream of running water, is a sure sign of impending calamity—the more the water is seen to be disturbed or to splash about, the heavier is the coming evil.—13. To dream of ants or insects, generally indicates good fortune, particularly if the dreamer supposes himself to be searching for them, or to see them in great numbers.—14. To dream of a mango-tree indicates a coming friend; if the mango-tree be in blossom, he comes with good news—if in fruit, with rich presents.

Fraser's Magazine.

Drowsiness from Cold.

Very striking and curious is the story of Dr. Solander's escape, when in company with Sir Joseph Banks, among the hills of Tierra del Fuego. They had walked a considerable way through swamps, when the weather became suddenly gloomy and cold, fierce blasts of wind driving the snow before it. Finding it impossible to reach the ships before night, they resolved to push on through another swamp into the shelter of a wood, where they might kindle a fire. Dr. Solander, well experienced in the effects of cold, addressed the men, and conjured them not to give way to sleepiness, but at all costs to keep in motion. 'Whoever sits down,' said he, 'will sleep; and whoever sleeps will wake no more.' Thus admonished and alarmed, they set forth once more; but in a little while the cold became so intense as to produce the most oppressive drowsiness. Dr. Solander was the first who found the inclination to sleep—against which he had warned the others so emphatically—too irresistible for him, and he insisted on being suffered to lie down. In vain Banks entreated and remonstrated; down he lay upon the snow, and it was with much difficulty that his friend kept him from sleeping. One of the black

servants began to linger in the same manner. When told that if he did not go on he would inevitably be frozen to death, he answered that he desired nothing more than to lie down and die. Solander declared himself willing to go on, but said he must first take some sleep. It was impossible to carry these men, and they were therefore both suffered to lie down, and in a few minutes were in a profound sleep. Soon after some of those who had been sent forward to kindle a fire returned with the welcome news that a fire awaited them a quarter of a mile off. Banks then happily succeeded in awaking Solander, who, although he had not been asleep five minutes, had almost lost the use of his limbs, and the flesh was so shrunk that the shoes fell from his feet. He consented to go forward, with such assistance as could be given; but no attempts to rouse the black servant were successful, and he, with another black, died there.

Fraser's Magazine.

Hard Studies.

To study hard for days and nights, without sleep, leads to a very erroneous idea of the harmlessness of this excess. Dr. Anderson was often heard to say, 'Clergymen, authors, teachers, and other men of reflective habits lose much health by losing sleep, and this because they carry their trains of thought to bed with them. In my earlier years I greatly injured myself by studying my sermons in bed. The best thing one can do, is to take care of the *last half-hour before retiring.* Devotion being ended, something may be done to quiet the strings of the harp, which otherwise would go on to vibrate. Let me commend to you this maxim, which I somewhere learnt from Dr. Watts, who says that in his boyhood he received it from the lips of Dr. John Owen, a very good pedigree for a maxim—*Break the chain of thoughts at bed-time by something at once serious and agreeable.* By all means break the continuity, or sleep will be vexed, even if not driven away. If you wish to know my method, it is to turn over the pages of my English Bible, alighting on a passage here, a passage there, backward and forward without plan, and without allowing my

mind to fasten on any, leaving any place the moment it ceases to interest me. Some tranquillising word often becomes a Divine message of peace : "He giveth his beloved sleep."'

Lunatics.

Of the influence of the planets and the moon—notwithstanding the name of Lunatics, and the vulgar impressions—no proof whatever exists. Yet physicians of eminence—Mead even—have said, 'the ravings of mad people kept lunar periods, accompanied by epileptic fits.' The moon apparently is equally innocent of the thousand things ascribed to her. When the paroxysms of mad people do occur at the full of the moon, Dr. Burrowes inclines to explain the matter thus : 'Maniacs are in general light sleepers ; therefore, like the dog which bays the moon, and many other animals, remarked as being always uneasy when it is at the full, they are disturbed by the flitting shadows of clouds which are reflected on the earth and surrounding objects. Thus the lunatic converts shadows into images of terror, and equally with all "whom reason lights not," is filled with alarm, and becomes distressed and noisy.'

Lunatics recognise readily : but that appears to be the only part of their memory unimpaired.

Death from want of Sleep.

The following terrible mode of punishment is peculiar to the criminal code of China. In 1850, a Chinese merchant at Amoy, convicted of the murder of his wife, was condemned to die by *the total deprivation of sleep.* The condemned was placed in prison under the surveillance of three guardians, who relieved each other every alternate hour, and who prevented the criminal from taking any sleep night or day. At the commencement of the eighth day, his sufferings were so intense, that he begged to be killed by strangulation ; and the terrible request was carried into execution.

From a Communication to the Royal Asiatic Society.

NIGHTMARE.

Medical writers have divided the nightmare, according to its phenomena, into complete, incomplete, mental and bodily. The complete nightmare, in which the suspension of the functions had been so powerful, has been known to prove fatal. In the incomplete, we fancy ourselves placed in a peculiar situation, opposed by some unexpected obstacle, and all our efforts seem of no avail to extricate ourselves from our difficulties. There is an incubus, called indirect, in which the dreamer is not the individual arrested in his movements; but he is impeded in his progress by the stoppage of his horse, his carriage, his ship, which no power can propel. In the mental or intellectual nightmare, the flow of our ideas is embarrassed, all the associations of our very thoughts appear to be singularly unconnected; we think in an unintelligible language; we write, and cannot decipher our manuscript: all is a mental chaos, and no thread can lead us out of the perplexing labyrinth. In the corporeal ephialtes, we imagine that some of our organs are displaced, or deranged in their functions. One man fancies that a malevolent spectre is drawing out his intestines or his teeth: a patient of Galen felt the cold sensation of a marble statue having been put into bed with him. These, however, are nothing else than the actual sensations we experience at the time. Thus Conrad Gesner fancied that a serpent had stung him in the left side of the breast; an anthrax soon appeared upon the very spot, and terminated his existence. Arnauld de Villeneuve imagined that his foot had been bitten, and a pimple which broke out on the spot soon degenerated into a fatal cancerous affection. Corporeal nightmare may therefore be simply considered as a symptom of disease, and not as a mysterious forewarning.

The cold stage of fever that often invades us in our sleep is the natural forerunner of the malady. This was the case with Dr. Corona, the physician of Pius VI. who upon two occasions was attacked with typhus fever, ushered in by a distressing dream or incubus. These physical phenomena only strengthen the opinion, that in our sleep we are equally alive to mental

impressions and bodily sufferings; and that, correctly speaking, there is no suspension of our intellectual faculties of perception, nor is there any interruption in the susceptibilities of our relative existence. The various doctrines regarding dreams illustrate this position.

Dr. Milligen's Curiosities of Medical Experience.

TRANCE.

Among the remarkable instances of Trance is Mrs. Godfrey, mistress of the Jewel Office in the Tower of London, and sister of the great Duke of Marlborough, who *lay in a trance*, apparently dead, for seven days, and was even declared by her medical attendants to be dead. Colonel Godfrey, her husband, would not allow her to be interred, or the body to be treated in the manner of a corpse; and on the eighth day she awoke, without any consciousness of her long insensibility. The authority assigned for this story is Mr. Peckard, Master of Magdalen College, in a work entitled 'Further Observations on the Doctrine of an Intermediate State.'

Stories are also told of a Mr. Holland, improperly treated as dead, who revived—only to die, however, from the effects of exposure to cold in the grave-dress; and of a Mrs. Chaloner, a lady of Yorkshire, who was buried alive, and who was found, on the re-opening of the vault in which she was interred, to have burst open the lid of her coffin, and to be sitting nearly upright in it.

Dr. Doddridge, on his birth, showed so little signs of life that he was laid aside as dead; but one of the attendants perceiving some motion in the body, took the infant under her charge, and by her treatment the flame of life was gradually kindled.

We quote the substance of the above from two communications to 'Notes and Queries,' Second Series, Nos. 32 and 38. In the former is a list of works upon this painful subject. Several cases are narrated in the Reports of the Royal Humane Society for 1787–9.

We add two narratives. In 1814, Anne Taylor, the daughter

of a yeoman of Tiverton, being ill, lay six days insensible, and to all appearance dead: during the interval she had a dream, which her family called *a trance*, an account of which was subsequently printed. On awaking from her stupor, by her request a person wrote down all she had to relate, which she desired her father would cause to be printed. This request he evaded until, as she told him, it would be too late. She died the same evening. Next morning her voice was heard by the person who wrote the narrative, inquiring if it was printed. Between ten and twelve o'clock the undertaker's men placed her in the coffin; and while the family were at dinner her voice was again heard, saying, 'Father, it is not printed.' This was attested by six witnesses; but, after her death, Mr. Vowles, a dissenting minister of Tiverton, in a sermon, was considered to have proved the fraud of the whole story.

More veracious is the case of the Rev. Owen Manning, the historian of Surrey, who, during his residence at Cambridge University, caught small-pox, and was reduced by the disorder to a state of insensibility and apparent death. The body was laid out, and preparations were made for the funeral, when Mr. Manning's father going into the chamber to take a last look at his son, raised the imagined corpse from its recumbent position, saying, 'I will give my poor boy another chance;' upon which signs of vitality were apparent. He was therefore removed by his friend and fellow-student Dr. Heberden, and ultimately restored to health. He had another narrow escape from death; for becoming subject to epilepsy, and being seized with a fit as he was walking beside the river Cam, he fell into the water, and was taken out apparently lifeless; Heberden, however, being called in, again became the means of Manning's restoration.

A monument in St. Giles's Church, Cripplegate, has strangely been associated with a trance story. In the chancel is a tablet in memory of Constance Whitney, representing her rising from a coffin; and the story relates that she had been buried while in a trance, but was restored to life through the cupidity of the sexton, which induced him to disinter the body to obtain possession of a valuable ring left upon her finger.

PSYCHOLOGICAL INQUIRIES.

Old and New Delusions.

Sir Benjamin Brodie consoled his professional brethren upon the spread of Homœopathy, by assuring them that, if this particular delusion could be banished, some other delusion would occupy its place. There seems to be no limit to the success either of quack doctors or of bolder impostors who set themselves above all doctors; and it is hardly to be expected that any improvement of primary, secondary, or any other education will render the great mass of the public less gullible than they are. The original followers of Mesmer belonged to the polished and sceptical society of Paris, and the Americans are not more fertile in mechanical invention than in all the forms of delusion and imposture. They sent us Spiritualism, and next they sent us Dr. Newton. To do the new prophet justice, he appears to believe firmly in himself, and when he said to a lame woman 'Love me and walk,' it is probable that he expected both processes to be simultaneously performed. It may be allowed that some of the visitors to Cambridge Hall either may have been, or may have fancied that they were, better after their visit. The familiar description of the working of the homœopathists 'by faith and powdered sugar' embodied a principle which is applicable to all varieties of quackery. The scientific physician who has learned by much study the littleness of human knowledge, does not promise more than he can perform, while the impudent pretender to science, of which he only knows enough to misapply its language, promises everything, and if nature performs something, he claims and usually

gets the credit of it. There is no reason why the imagination, which is powerful in nervous disorders, should not be beneficially affected by a visit to Dr. Newton, as well as to others who have claimed similar gifts before him. The medical advisers of railway companies consider that nervous disorders are frequently imaginary, and it is quite possible that the cure, as well as the disease, may be produced by a mental effort.

The Saturday Review.

Arguing *à priori*, it might be inferred that the growing demand for proof positive would be fatal to imposture and quackery. But the contrary is the fact. 'It is curious to note how periodical these epidemic visitations of miracle have become. Mesmeric visions and prophecies, clairvoyance, spirit-rapping, table-turnings and liftings, succeed one another in popular fashion, with certain intervals between, to allow prior detections to be forgotten, and to catch the credulous of a new generation.' The last visitation of spiritualism has proved both virulent and widespread; exposure has proved powerless as an antidote, and the epidemic has recently broken out with aggravated symptoms, in the very stronghold of science—the Royal Society itself. 'In all superstitions,' says Bacon, 'wise men follow fools.' Learned men, who are not necessarily wise men, occasionally do: they also occasionally follow rogues; and there is, consequently, little cause for wonder when a combination of folly and roguery, like spiritualism, counts proselytes by the score. It is the eternal ineradicable liability to such delusions that renders the human mind essentially the same in all ages; we fear we must say nearly the same of the heart. . . . Knowledge will clear the surface without penetrating to the core. As for legislation—

> 'How small of all that human hearts endure,
> That part which laws or kings can cause or cure!'

Quarterly Review, No. 263.

Dr. Wigan and 'Duality of the Mind.'

Many years ago, Dr. Wigan, then a surgeon, practised on Dowgate Hill, at the corner of Cloak Lane, and facing the burial-ground of All-Hallows-the-Less, destroyed in the Great

Fire, and not rebuilt. Dr. Wigan had long entertained peculiar notions as to the pre-existence of souls—when the whole scene around you appears to be reacting after a long interval, and you say, *all this has happened before;* as Lord Lindsay says, 'you remember it as some remote and indefinite period of pre-existence; you always know what will come next, and sit spell-bound, in a sort of calm expectancy.' Dr. Wigan has well described this sensation in his clever work, 'The Duality of the Mind,' adding: 'all seems to be *remembered*, and to be now attracting attention for the second time; never is it supposed for the *third* time.' After observing that the delusion occurs only when the mind has been exhausted by excitement, the persuasion of the scene being a repetition coming on when the attention has been *roused* by some accidental circumstance, Dr. Wigan explains, 'Only one brain has been used in the immediately preceding part of the scene; the other brain has been asleep, or in an analogous state nearly approaching it. When the attention of both brains is roused to the topic, there is the same vague consciousness that the ideas have passed through the mind before which takes place on re-perusing the page we have read while thinking on some other subject. The ideas *have* passed through the mind before; and as there was not a sufficient consciousness to fix them in the mind without a renewal, we have no means of knowing the length of time that has elapsed between the faint impression received by the single brain, and the *distinct* impression by the double brain; it may seem to have been many years.'

Dr. Wigan often discussed this subject with his friend Dr. Gooch, who took great interest in topics occupying the debatable region between physics and metaphysics; but neither of the doctors could devise a satisfactory explanation of the above phenomenon. In support of Dr. Wigan's theory, the cause has been referred to 'some incongruous action of the double structure of the brain, to which perfect unity of action belongs in a healthy state.'

In the 'Book of Days' appears a very interesting paper upon this inquiry, if we mistake not by the late Dr. Robert Chambers, entitled 'Mystic Memory,' in which he says:—

In February 1828, Sir Walter Scott was breaking himself down by over-hard literary work, and had really fallen to some extent out of health. On the 17th he enters in his Diary, that, on the preceding day at dinner, although in company with two or three beloved old friends, he was strangely haunted by what he would call, 'the sense of pre-existence;' namely, a confused idea that nothing that passed was said for the first time—that the same topics had been discussed, and the same persons had stated the same opinions on them.' The sensation, he adds, 'was so strong as to resemble what is called a *mirage* in the desert, or a calenture on board of ship, when lakes are seen in the desert, and sylvan landscapes in the sea. . . . There was a vile sense of want of reality in all that I did and said.'

This experience of Scott is one which has often been felt, and often commented on by authors, by Scott himself amongst others. In his novel of 'Guy Mannering,' he represents his hero, Bertram, as returning to what was, unknown to him, his native castle, after an absence from childhood, and thus musing on his sensations: 'Why is it that some scenes awaken thoughts which belong, as it were, to dreams of early and shadowy recollection, such as my old Brahmin Moonshie would have ascribed to a state of previous existence? How often do we find ourselves in society which we have never before met, and yet feel impressed with a mysterious and ill-defined consciousness that neither the scene, the speakers, nor the subject are entirely new; nay, feel as if we could anticipate that part of the conversation which has not yet taken place.' Warren and Bulwer Lytton make similar remarks in their novels, and Tennyson adverts to the sensation in a beautiful sonnet:—

> As when with downcast eyes we muse and brood,
> And ebb into a former life, or seem
> To lapse far back in a confused dream
> To states of mystical similitude;
> If one but speaks, or hems, or stirs his chair,
> Ever the wonder waxeth more and more,
> So that we say, All this hath been before.
> All this *hath* been, I know not when or where;
> So, friend, when first I looked upon your face,

Our thoughts gave answer each to each, so true
Opposèd mirrors each reflecting each—
Although I knew not in what time or place,
Methought that I had often met with you,
And each had lived in the other's mind and speech.

Theological writers have taken up this strange state of feeling as an evidence that our mental part has actually had an existence before our present bodily life, souls being, so to speak, created from the beginning, and attached to bodies at the moment of mortal birth. Glanvil and Henry More wrote to this effect in the seventeenth century; and in 1762, the Rev. Capel Berrow published a work entitled 'A Pre-existent Lapse of Human Souls demonstrated.' More recently, we find Southey declaring: 'I have a strong and lively faith in a state of continued consciousness from this stage of existence; and that we shall recover *the consciousness of some lower stages through which we may previously have passed*, seems to me not improbable.' Wordsworth, too, founds on this notion in that fine poem where he says—

Our birth is but a sleep and a forgetting.
The soul that rises in us, our life's star,
Has had elsewhere its setting,
And cometh from afar.

With all respect for the doctrine of a previous existence, it appears to us that the sensation in question is no sort of proof of it, for it is clearly absurd to suppose that four or five people who had once lived before, and been acquainted with each other, had by chance got together again, and in precisely the same circumstances as on the former occasion. The notion, indeed, cannot for a moment be seriously maintained.

The writer in the 'Book of Days' then refers to Dr. Wigan's work, in which he is of opinion that the two hemispheres of the brain had each its distinct power and action, and that each often acts singly. Before adverting to this theory of the illusion in question, let us hear a remarkably well-described case, which he brings forward as part of his own experience :—

'The strongest example of this delusion I ever recollect in my own person was on the occasion of the funeral of the

Princess Charlotte. The circumstances connected with that event formed in every respect a most extraordinary psychological curiosity, and afforded an instructive view of the moral feelings pervading a whole nation, and showing themselves without restraint or disguise. There is, perhaps, no example in history of so intense and so universal a sympathy; for almost every conceivable misfortune to one party is a source of joy, satisfaction, or advantage to another. One mighty all-absorbing grief possessed the nation, and was aggravated in each individual by the sympathy of his neighbour, till the whole people became infected with an amiable insanity, and incapable of estimating the real extent of their loss. No one under five-and-thirty or forty years of age can form a conception of the universal paroxysm of grief which then superseded every other feeling.

'I had obtained permission to be present on the occasion of the funeral, as one of the Lord Chamberlain's staff. Several disturbed nights previous to that ceremony, and the almost total privation of rest on the night immediately preceding it, had put my mind into a state of hysterical irritability, which was still further increased by grief and by exhaustion from want of food; for between breakfast and the hour of interment at midnight, such was the confusion in the town of Windsor that no expenditure of money could procure refreshment.

'I had been standing four hours, and on taking my place by the side of the coffin, in St. George's Chapel, was only prevented from fainting by the interest of the scene. All that our truncated ceremonies could bestow of pomp was there, and the exquisite music produced a sort of hallucination. Suddenly after the pathetic 'Miserere' of Mozart, the music ceased, and there was an absolute silence. The coffin, placed on a kind of altar covered with black cloth (united to the black cloth which covered the pavement), sank down so slowly through the floor, that it was only in measuring its progress by some brilliant object beyond it that any motion could be perceived. I had fallen into a sort of torpid reverie, when I was recalled to consciousness by a paroxysm of violent grief on the part of the bereaved husband, as his eye suddenly caught the coffin sinking

into its black grave, formed by the inverted covering of the altar. In an instant I felt not merely an *impression*, but a *conviction* that I had seen the whole scene before on some former occasion, and had heard even the very words addressed to myself by Sir George Naylor.'

Dr. Wigan's is a plausible idea; but we have no proof that a single hemisphere of the brain has this distinct action; the analogy of the eyes is against it, for there we never find one eye conscious or active, and the other not. Moreover, this theory does not, as will be seen, explain all the facts; and hence, if for no other reason, it must be set aside.

The latest theory on the subject is one started by a person giving the signature 'F' in the 'Notes and Queries' (February 14, 1857). This person thinks that the cases on record are not to be explained otherwise than as cases of fore-knowledge. 'That under certain conditions,' says he, 'the human mind is capable of foreseeing the future, more or less distinctly, is hardly to be questioned. May we not suppose that, in dreams or waking reveries, we sometimes anticipate what will befall us, and that this impression, forgotten in the interval, is revived by the actual occurrence of the event foreseen?' He goes on to remark that in the 'Confessions' of Rousseau there is a remarkable passage which appears to support this theory.

In 'Notes and Queries,' 2nd series, vol. iii., p. 132, the Rev. W. L. Nichols, of Bath, adduces a still more remarkable case from a memoir of William Hone, who, as is well known, was during the greater part of his life a disbeliever of all but physical facts. He had been worn down to a low condition of vitality, by a course of exertion of much the same character as that which gave Scott an experience of the mystic memory. Being called, in the course of business, to a particular part of London, with which he was unacquainted, he had noticed to himself, as he walked along, that he had never been there before. 'I was shown,' he says, 'into a room to wait. On looking round, everything appeared perfectly familiar to me; I seemed to *recognise* every object. I said to myself, "What is this? I was never here before, and yet I have seen all this; and, if so, there is a very peculiar knot in the shutter."' He

opened the shutter, and found the knot! 'Now then,' thought he, 'there is something I cannot explain on my principles; there must be some power beyond matter.' This consideration led Mr. Hone to reflect further on the wonderful relations of man to the Unseen, and the ultimate result was his becoming an earnestly religious man.

Mr. Nichols endeavours to show the case might be explained by Dr. Wigan's theory of *a double brain*; but it is manifestly beyond that theory to account for the preconception of the knot in the shutter. This explanation failing, we are compelled to think of clairvoyance or the prophetic faculty, because no other explanation is left. On this assumption, an experience of mystic memory might be supposed to arise from a previous dream, or, it may be, a day reverie, perhaps one of only an instant duration and very recent occurrence, in which the assemblage of objects and transactions was *foreseen*:—it appears as the recollection of a more or less forgotten vision.

Psychological Results.

Sir Benjamin Brodie, in one of his popular volumes, records these curious results:—

'There are individuals who, having suffered from disease of the brain, are unable to express their thoughts by speech, although, their faculties being little or not at all impaired otherwise, they have a perfect comprehension of what others say, and of what they wish to say themselves. Some of them can utter a few words, others none at all; and others, again, when intending to say one word, use another. There are other cases still more remarkable, the facts of which may well lead us to believe that the organ of speech, if not originally and congenitally wanting, has been at any rate from the beginning so imperfect as to be useless. Two examples of what I have now mentioned have come under my own observation. Several years ago I saw a little boy, then about five years old, whose faculty of speech was limited to the use of the word *papa*. This, it may be observed, is so simple a sound, that dolls are

made, by some very simple mechanism, to produce it very distinctly. I soon ascertained that his sense of hearing was perfect, and that there was nothing peculiar in the formation of the soft palate, mouth, and lips. There was no want of inclination to speak, but in the attempt to do so he produced sounds which were wholly inarticulate. So far was he from being deficient as to his powers of apprehension, that he seemed to be even beyond what children of the same age generally are in this respect. Although he could not speak himself, he understood perfectly what was said to him by others, and expressed his answers by signs and gestures, spelling with counters monosyllabic words which he was incapable of uttering. I should add, that the external senses and powers of locomotion were perfect, and that all the animal functions were properly performed. The only other sign of disease or imperfection of the nervous system was that, for two or three years before I saw him, the boy had been subject to fits or nervous attacks, attended with convulsions, but which (as I was informed) his medical attendant in the country regarded as having the character of hysteria rather than that of epilepsy.'

Eight years afterwards, the boy was still unable to speak, though in other respects he had made great progress. Again :—

'A gentleman found that he had lost the power of vision in one eye. Then he gained it partially in that eye, but lost it in the other. Afterwards he partially regained it in the eye last affected. He could now see objects when placed in certain positions, so that the image might fall on particular parts of the retina, while he was still unable to see them in other positions. These facts sufficiently proved the existence of some actual disease. But observe what happened besides. His memory was affected as well as his sense of sight. Although in looking at a book he recognised the letters of the alphabet, he forgot what they spelled, and was under the necessity of learning again to read. Nevertheless, he knew his family and friends; and his judgment, when the facts were clear in his mind, was perfect.'

Cure for Hypochondriasis.

There are few persons who have not met with cases of *hypochondriacs*, who have been relieved and made more happy, by useful and disinterested occupation in promoting the welfare of others; and we are not aware of any instance of a cure perfected in a case apparently so hopeless as that of Captain Blake, distinguished for his benevolent exertions in the attempt to supply London with fish by land carriage. Dr. Heberden used very frequently to be sent for by him. The captain was a hypochondriac, attentive to every little feeling, and anxious about its consequences. In this state he continued for several years; and was, during that time, seldom more than a week or two without consulting the doctor; who had tried not only all the medicines which he thought likely to correct any cause of disease arising from bodily infirmity, but every argument which his humanity and good sense could suggest for the comfort of his mind; but in vain.

At length, Dr. Heberden heard no more of his patient, till, after a considerable interval, he found that Captain Blake had formed a project of conveying fish to London from some of the seaports in the west, by means of little carts adapted for expeditious land carriage. The arrangement and various occupation of the mind in forwarding this object, were sufficient *entirely to supersede all sense of his former malady;* which, from that time, as far as is known, never returned.

Dr. Heberden used frequently to mention in conversation the circumstances of this extraordinary case, which was communicated to his son, through their common friend, the Bishop of Durham.—*See Comforts of Old Age, Notes, p.* 257.

Coleridge's Opium-eating.

Coleridge's indulgence in the use of opium, it is a melancholy fact, lasted until it began to weaken and obscure his vigorous and brilliant intellect, before his friend Cottle became aware of it, when, in 1814, he wrote to him a very faithful letter, full of dissuasives against the habit. In Coleridge's reply occur these affecting passages:—

'For ten years the anguish of my spirit has been indescribable, the sense of my danger staring, but the consciousness of my guilt worse—far worse than all. I have prayed, with drops of agony on my brow; trembling not only before the justice of my Maker, but even before the mercy of my Redeemer. "I gave thee so many talents, what hast thou done with them?"

'Secondly, overwhelmed as I am with a sense of my direful infirmity, I have never attempted to disguise or conceal the cause. On the contrary, not only to friends have I stated the whole case with tears, and the very bitterness of shame, but in two instances I have warned young men, mere acquaintances, who had spoken of taking laudanum, of the direful consequences, by an awful exposition of its tremendous effects on myself.

'Thirdly, though before God I cannot lift up my eyelids, and only do not despair of His mercy, because to despair would be adding crime to crime, yet to my fellow-men I may say that I was seduced into the accursed habit ignorantly. I had been almost bedridden for many months, with swellings in my knees. In a medical journal, I unhappily met with an account of a cure performed in a similar case, or what appeared to me so, by rubbing in laudanum, at the same time taking a given dose internally. It acted like a charm—like a miracle! I recovered the use of my limbs, of my appetite, of my spirits, and this continued for near a fortnight. At length the unusual stimulus subsided, the complaint returned, the supposed remedy was recurred to; but I cannot go through the dreary history.

'Suffice it to say, that effects were produced which acted on me by terror and cowardice, of pain and sudden death, not—so help me God—by any temptation of pleasure, or expectation or desire of exciting pleasurable sensations. On the very contrary, Mrs. Morgan and her sister will bear witness so far as to say that the longer I abstained, the higher my spirits, the keener my enjoyments, till the moment, the direful moment arrived, when my pulse began to fluctuate, my heart to palpitate, and such falling down, as it were, of my whole frame,

such intolerable restlessness and incipient bewilderment, that, in the last of my several attempts to abandon the dire poison, I exclaimed in agony, which I now repeat in seriousness and solemnity, 'I am too poor to hazard this.' Had I but a few hundred pounds—but two hundred pounds—half to send Mrs. Coleridge, and half to place myself in a private madhouse, where I could procure nothing but what a physician thought proper, and where a medical attendant could be constantly with me for two or three months (in less than that time life or death would be determined), then there might be hope. Now there is none! You bid me rouse myself: go bid a man, paralytic in both arms, to rub them briskly together, and that will cure them. "Alas!" he would reply, "that I cannot move my arms is my complaint and my misery."'

Writing to another friend, a short time after, he says, 'Conceive a poor miserable wretch, who for many years has been attempting to beat off pain by a constant recurrence to the vice that reproduces it. Conceive a spirit in hell, employed in tracing out for others the road to that heaven from which his crimes exclude him. In short, conceive whatever is most wretched, helpless, and hopeless, and you will form as tolerable a notion of my state as it is possible for a good man to have. I used to think the text in St. James, that 'he who offends in one point offends in all,' very harsh; but I now feel the awful, the tremendous truth of it. In the one crime of opium, what crime have I not made myself guilty of? Ingratitude to my Maker, and to my benefactors injustice, *and unnatural cruelty to my poor children*, self-contempt for my repeated breach of promise, nay, too often, actual falsehood.'

Yet, Coleridge afterwards broke away from this dreadful habit, and his life was lengthened out some twenty years longer.

Opium-Smoking.

Readers of 'Edwin Drood' will remember the description of the opium-smoker as he is found at the East end. The steady influx of the Chinese into that quarter has multiplied the victims to the vice and the houses in which they are accommo-

dated. These latter are of a very low character, and are mostly kept by Chinese, to whose countrymen opium-smoking represents the indulgence which spirit-drinking does to the British seaman. The drug as it is inhaled is an aqueous extract made by first dissolving the crude opium in water, and steaming, then carefully boiling. Impurities, like the fragments of leaves, sticks, and so forth, are skimmed off till it has the consistency and appearance of tar. The prepared opium represents about twice its own weight of the crude. It is retailed to the smokers, who keep it in small boxes made of buffalo's horn. The smoker puts some opium, about the size of a pea, into the bowl of his pipe, which is of earthenware, and having lighted it at an adjacent lamp, reclines on his side and inhales it in two or three whiffs, retaining it in his lungs as long as possible. So employed may be seen at any time in certain houses in the neighbourhood of Ratcliff Highway scores of Chinese and Lascars, whose sallow, corpse-like complexions, bleared eyes, and relaxed look, indicate the effects of their indulgence. The amount these smokers consume is sometimes surprising. Many of them use a quarter of an ounce daily; some, it is said, as much as one ounce. They rapidly get decrepid in body and mind, and die in starvation and rags, nobody knows exactly how. For all this, the vice is greatly on the increase in China and among the Chinese settlers in that quarter of the globe.

Lancet.

SENSATIONS IN DROWNING. 'THE GREAT BOOK OPENED.'

It is related by some contributors to the pages of 'Notes and Queries,' that certain persons who have narrowly escaped drowning have experienced psychological sensations which border upon 'visions,' of 'the Great Book opened.' Dr. Wollaston wrote a paper on this subject, which contains answers to some queries propounded by the Doctor to a naval officer, who, when a midshipman, had the misfortune to fall overboard; and who in his replies recounts all the sensations he experienced as 'a drowning man.' These were communicated by Dr. Wollaston to Sir John Barrow, who refers to them in his published

'Life.' In Everett's 'Life of the late Dr. Adam Clarke' there is also a very curious communication made by that learned man to Dr. Lettsom, and descriptive of his own sensations when nearly drowned in the Irish Channel.

In 'Blackwood's Magazine' for December 1854 is a paper by Mr. Samuel Warren, in which is the following passage: 'I ventured to say that I knew an instance of a gentleman who, in hastily jumping from on board the "Excellent," to catch a boat that was starting for shore, missed it, and fell into the water of Portsmouth harbour, sinking to a great depth. For a while he was supposed to be drowned. He afterwards said that all he remembered after plunging into the water was a sense of freedom from pain, and a sudden recollection of all his past life, especially of all his guilty actions which he had long forgotten.

Sir Benjamin Brodie, in his 'Psychological Inquiries,' quotes a letter of Sir Francis Beaufort, describing what happened to himself when he was preserved from being drowned. 'Every incident of his life seemed to glance across his recollection in a retrograde succession; not in mere outline, but the picture being filled with every feature, forming a kind of panoramic view of his whole existence, each act accompanied by a sense of right or wrong.' De Quincey relates a similar case of a female relative of his. Having fallen into a river, and being on the verge of death, but for assistance that reached her, she saw in a moment her whole life, in its minutest incidents, arranged before her as in a mirror, and she had a faculty developed as suddenly for comprehending the whole and every part. 'I am convinced,' adds De Quincey, 'that the dread book of account which the Scriptures speak of is, in fact, the mind itself of each individual. There is no such thing as forgetting possible to the mind. A thousand accidents may and will interpose a veil, but the inscription remains for ever—just as the stars seem to withdraw before the common light of day, whereas we all know that it is the light drawn over them as a veil, and that they are waiting to be revealed when the obscuring daylight shall have withdrawn.'

A Correspondent has contributed to 'Notes and Queries,'

vol. xii. p. 500, the following: 'A few years ago, I had the misfortune to suffer shipwreck upon a distant island, and, turning up my MS. journal, I find I have thus recorded my experience :—

'How intense and how rapid the thoughts which rush through the mind of the drowning man! Having exceeded the bounds I have set myself for this sketch of a notable passage in my life, I shall not inflict upon you, my dear ——, my sensations in detail, while thus hanging between the two worlds, and under the firm persuasion that my days in this were numbered. Suffice it to say that, with the dash of the huge wave that engulphed me, came the vivid consciousness that the ocean rolled over my head, perhaps for ever.

'Of corporeal suffering during the critical moment, I have no recollection, but of mental a very distinct one, arising from the sudden presentation to my mental vision, in life-like reality, of dear and almost forgotten faces in mournful attitudes, and past whom I appeared to be flying.'

Yet, another Correspondent of 'Notes and Queries' controverts the above statement as follows :—

'In your twelfth volume there are several communications on the singular sensations which some persons appear to have experienced in drowning. I will not question the veracity of those who have undergone the fearful ordeal, but I take the liberty to think that they must have been persons of very peculiar psychological idiosyncrasies. I have myself been twice drowned to insensibility; once in the river Avon, in the vicinity of Rugby, and once in the Oxford Canal. In each instance, till the extinction of consciousness, I was fully aware of the awful position in which I was placed; quite collected, free from pain, and hopeless of being saved from impending death. But I had no particular remembrance of anything, either good or bad, which had occurred during my past life; and, as I consider myself a fair average specimen of humanity, neither much better nor much worse than my neighbours, I am disposed to conclude, from what I have heard and seen, as well as suffered, that the experience of nine out of every ten persons who have been drowned and recovered accords with my own.'

On the other hand, 'An old man, in describing the sensations he felt at drowning when he was with difficulty recovered, said he had the ringing of bells in his ears, which increased as consciousness was becoming less: and he felt as if all the bells of heaven were ringing him into Paradise!—the most soothing sensation.'

With respect to 'the Great Book,' Mr. Warren says, 'I do not know how to express it, but I have several times had a transient consciousness of more ordinary incidents then occurring having somehow or other happened before, accompanied by a vanishing idea of being able to predict the sequence. I once mentioned this to a man of powerful intellect, and he said, 'So have I.' Again, it may be that there is more of truth than one suspects in the assertion that I have met with in a work of M. de Quincey's, that *forgetting*, absolute forgetting—is a thing not possible to the human mind. Some evidence of this may be observed from the fact of long-missed incidents and states of feeling suddenly being reproduced, and without any perceptible train or association. Were this to be so, the idea is very awful; and it has been suggested by a very great thinker, that nearly perfect memory of everything may constitute the GREAT BOOK which shall be opened in the last day, on which man has been distinctly told that the secrets of all hearts shall be made known: for *all things are* naked and opened unto the eyes of Him with whom we have to do. (Heb. iv. 13.)

We remember that, one Sunday afternoon, Dr. Wilberforce, then Bishop of Oxford, in the course of a most impressive sermon, at St. James's Church, Piccadilly, related, it came to his knowledge that a friend of his, a man of strong intellect and sound and trustworthy memory, in crossing a railway, being overtaken by a railway train in rapid motion, lay down between the rails, and while the train was passing over him, he experienced sensations akin to those above recorded as the opening of the Great Book, or long-missed incidents and states of feeling being reproduced, without any perceptible train of association.

Extraordinary Memories.

Cardinal Wiseman, in his very able lecture on the Phenomena of Memory, relates several extraordinary developments, commencing with Spontaneous Memory, a power of the mind to receive and retain impressions without seeking them. He mentioned the case of a boy of ten years old, who possessed such marvellous readiness at figures that, when questioned about his native village in Sicily, he could tell with the utmost accuracy the number of houses in every street—the number of doors and windows in every house; in fact, he had noted every minutest object: not only this, but if he walked but once through a town he had never seen before, conversing the while with those who accompanied him, he would yet be aware of every circumstance in any way connected with it, he himself being perfectly unconscious of the process. It seemed as if the things counted themselves in his mind, he remaining as passive as the photographic plate receiving its impression from the object presented to it. Of Themistocles we are told that he retained all he saw and heard to an extent that was the frequent cause of sorrow and grief to him; and on one occasion, when a friend had offered to show him the way to an artificial memory, he said what he wanted to learn was the art of forgetting. Of Lucullus, Cicero has said that he possessed a similar faculty. Now, this connected with another power, constitutes a higher degree, and this he should call, secondly, Applied Memory, or the power of retaining what we wish to remember; its lowest exercise is the power of retaining sounds, such as mere words. Quintilian tells us that Theodectes could repeat almost any number of disconnected words after having once read them. Seneca, when young, was remarkable for his retention of detached words; and on one occasion repeated 200 lines either backwards or forwards after hearing them read. Another instance is that of Muretus, a Corsican, who, having heard 36,000 disconnected words in several languages, repeated them all again at the end of twelve months. Cicero tells us that Hortensius possessed this power, and, being challenged to a proof, attended a public auction, on his return from which he repeated

every word that had passed. A French emigrant priest came over at the Revolution and settled in the north of England, where he became so noted for the peculiar tenacity of his recollective powers, that he was known by no other name than that of 'M. La Mémoire.' Once, when visiting at a house in the country, he was asked to give a specimen of his wonderful capabilities, on which he took up a newspaper, ran his eyes over it, and in half an hour declared himself ready. He then began at the top corner, and repeated every line from beginning to end, including quotations of funds, advertisements, &c., without missing a word. In addition to this, he repeated the entire conversation of two parties seated at whist-tables, with every little dispute that had arisen respecting the game which had occurred while he was thus engaged, and that without having seen either table. There have been four remarkable men who knew the entire Bible by heart. Pope Paul IV., Peter Pontanus, a blind man, Michael Langlois, and Augustus Varenius, a German, who knew it in the Hebrew tongue. Six women have also distinguished themselves in a similar manner.

Every one is acquainted with Philidor's marvellous technical memory, and the anecdote of the three games of chess which he played simultaneously, without in either instance seeing the board. Father Zachary, who at nine was celebrated as a calculating boy, executed repeatedly a very similar feat; but, in addition, always contrived to checkmate his three adversaries at the same move. In the authors of the sixteenth and seventeenth century, Scaliger Lipsius, Selden, Bocart, we find page after page so rich in apt and terse quotation, that we are not surprised, when we come to study the lives of those men, to learn that they retained all they read, and knew exactly when and where to employ it. Lipsius, we were told, was always ready with materials for anything. He once undertook to recite a passage, which some of the company doubting, he challenged one of them to hold a dagger to his breast, and to pierce him with it at the first error he should make. Aurelio Brandolini and Lippo Fiorentini offered further examples. The latter translated into elegant verse, from his recollection of the original, and without looking at it, the whole thirty-six

books of Pliny's Natural History, touching upon every imaginable subject, and was quoted by Pliny the younger as embracing universal knowledge. Here we see not only retentive powers of recollection, but positive dominion exercised over it by the possessor. We might read of Girolamo Mazzio, who, when taken prisoner by the Turks (as if out of contradiction, because he never heard the sound of a bell during his incarceration), wrote a history of bells, 'De Tintinnabulis,' in which he quotes upwards of 200 authors, and this without any possibility of procuring a single book of reference.

Of Military Memory, there are extraordinary instances. It would appear to have been the peculiarity of many great commanders to remember the names of every individual soldier in their armies. Valerius Maximus relates this of Cyrus, and states further that he had no memory for books or other subjects. Adrian is said to have remembered not only the names of the almost countless individuals who formed the Roman legions, but never forgot the name of a place through which he had once passed. Frederick the Great, in addition to his remembrance of the names, knew the faces of all those who composed his troops, and never failed to observe when there was a new soldier among them. Once on the King's making his usual round to review the troops, a foreign soldier having entered the service, and his officer being aware that the King would observe every new face, and would put his three ordinary questions to him, had desired him to learn by rote the necessary answers in German, of which he did not understand a word. As was expected, Frederick rode up to the man, and began his interrogatory; but it happened this time that he reversed the order of his questions. When, therefore, he began with 'How long have you been in my service?' the youth answered, with the utmost readiness and assurance, 'twenty years.' 'Impossible,' said the King, 'why, how old are you?' 'Six months, sire,' was the prompt reply. 'Then,' said his Majesty, mystified beyond expression, 'either you or I must be mad.' 'Both, your Majesty,' said the man, who expected the usual question, as to whether he was satisfied with his position and his pay.

Musical Memory is, perhaps, the most complicated kind, but not uncommon, and more or less physical. The celebrated Professor Mazzinghi confessed, that to attain the degree of perfection to which he had arrived, he had practised eighteen hours a day for twenty years. A new opera had been received for rehearsal, and was entrusted to Mazzinghi for inspection. He ran his eye over the music; took in the whole thing at a glance; tried over the several portions, and laid it aside. Shortly after a fire broke out in the theatre, and, among other property, the score of the new opera disappeared in smoke. Mazzinghi, by means of his marvellous musical memory, was enabled to console the despairing author by assuring him that he could write out the whole of his work again without losing a single bar.

Next, of the Genealogical Memory. Müller, the historian of Switzerland, was remarkable for this: he had at his fingers' ends the details and names of every first, second, and even third class family in every canton; and never was so unhappy as on one occasion when he had lost the clue to a matrimonial alliance of one branch of one of the most insignificant of these genealogical trees. There is a Scotch nobleman of the present day equally remarkable in this respect.

Next, of the Poetical Memory. When John Dominic Tedeschi was immured in the prisons of Venice he, for the first time, discovered he was a poet, and composed no fewer than 4,200 verses. He had, however, no means of writing them, and retained them in his head till he was set at liberty, when he wrote them all down from recollection. He used to say he could now thank God for two new gifts—strength of memory and power of developing it by direction.

Medical Powers of Music.

The medical power of harmonious sounds was anciently fully admitted. We find Pythagoras directing certain mental disorders to be treated by music. Thales, called from Crete to Sparta, cured a disastrous pestilence by its means. Martinus Capella affirms that fevers were thus removed. Xenocrates

cured maniacs by melodious sounds, and Asclepiades conquered deafness with a trumpet. In modern times it has been related of a deaf lady that she could only hear while a drum was beating, and a drummer was kept in the house for the purpose of enabling her to converse. Aulus Gellius tells us that a case of sciatica was cured by gentle modulations, and Theophrastus maintains that the bites of serpents and other venomous reptiles can be relieved by similar means. Ancient physicians, who attributed many diseases to the influence of evil spirits, fancied that harmonious sounds drove them away, more especially when accompanied by incantations; and we find in Luther, 'that music is one of the most beautiful and glorious gifts of God, to which Satan is a bitter enemy.'

In more modern times we have several instances of the medical powers of music, and the effect produced by Farinelli on Philip of Spain is well known. This monarch was in such a deplorable state of despondency from ill health, that he refused to be shaved or to appear in public. On the arrival of Farinelli, the Queen was resolved to try the power of music, and a concert was ordered in a room adjoining the King's chamber: Farinelli sang two of his best airs, which so overcame Philip that he desired he might be brought into his presence, when he promised to grant him any reasonable request he might make. The performer, in the most respectful manner, then begged of the King to allow himself to be shaved and attended by his domestics, to which Philip consented. Farinelli continued to sing to him daily until a perfect cure was effected. The story of Tartini is rather curious: in a moment of musical enthusiasm he fell asleep, when the devil appeared to him playing on the violin, bidding him with a horrible grin to play as well as he did; struck with the vision, the musician awoke, ran to his harpsichord, and produced the splendid sonata which he entitled 'The Devil's.' Brückmann and Hufeland relate cases of St. Vitus's dance, cured by music, which, according to Desessarts, also relieved catalepsy. Schneider and Becker have ascertained its influence in hysteric and hypochondriac affections.

Various well-authenticated cases lead us to suppose that a

sensibility to music long latent may be called into action by accidental circumstances. A case is on record of a country-woman, twenty-eight years of age, who had never left her village, but was, by mere chance, present at a *fête* where a concert was performed, and dancing to a full band afterwards followed. She was delighted with the novelty of the scene; but, the *fête* concluded, she could not dismiss from her mind the impression the music had produced. Whether she was at her meals, her devotions, her daily occupation, or in her bed,—still, or moving about,—the airs she had heard, and in the succession in which they had been performed, were ever present to her recollection. To sleep she became a stranger,—every function became gradually deranged, and six short months terminated her existence, not having for one moment lost this strange sensation: and during this sad period, when any false note on the violin was purposely drawn, she would hold her head with both hands, and exclaim, 'Oh! what a horrible note! it tears my brain!'

Sir Henry Halford relates the case of a man in Yorkshire, who after severe misfortunes lost his senses, and was placed in a lunatic asylum. There, in a short time, the use of the violin gradually restored him to his intellects; so promptly, indeed, that six weeks after the experiment, on hearing the inmates of the establishment passing by, he said, 'Good morning, gentlemen; I am quite well, and shall be most happy to accompany you.'

Curious anecdotes are related of the effect of music upon animals. Marville has given the following amusing account of his experiments. 'While a man was playing on a trump-marine, I made my observations on a cat, a dog, a horse, an ass, a hind, some cows, small birds, and a cock and hens, who were in a yard under the window: the cat was not the least affected; the horse stopped short from time to time, raising his head up now and then as he was feeding on the grass; the dog continued for above an hour seated on his hind-legs, looking steadfastly at the player; the ass did not discover the least indication of his being touched, eating his thistles peaceably; the hind lifted up her large wide ears, and seemed very attentive; the cows slept a little, and after gazing at us,

went forward; some little birds that were in an aviary, and others on trees and bushes, almost tore their little throats with singing; but the cock, who minded only his hens, and the hens, who were solely employed in scraping a neighbouring dunghill, did not show in any manner that the trump-marine afforded them pleasure.' That dogs have an ear for music cannot be doubted: Steibelt had one which evidently knew one piece of music from the other: and a modern composer, my friend, Mr. Nathan, had a pug-dog that frisked merrily about the room when a lively piece was played, but when a slow melody was performed, particularly Dussek's Opera 15, he would seat himself down by the piano, and prick up his ears with intense attention until the player came to the forty-eighth bar; as the discord was struck, he would yell most piteously, and with drooping tail seek refuge from the unpleasant sound under the chairs or tables.

Eastcot relates that a hare left her retreat to listen to some choristers who were singing on the banks of the Mersey, retiring whenever they ceased singing, and reappearing as they recommenced their strains. Bossuet asserts, that an officer confined in the Bastille drew forth mice and spiders to beguile his solitude with his flute; and a mountebank in Paris had taught rats to dance on the rope in perfect time. Chateaubriand states as a positive fact, that he has seen the rattlesnakes in Upper Canada appeased by a musician; and the concert given in Paris to two elephants in the Jardin des Plantes leaves no doubt in regard to the effect of harmony on the brute creation. Every instrument seemed to operate distinctly as the several modes of pieces were slow or lively, until the excitement of these intelligent creatures had been carried to such an extent that further experiments were deemed dangerous.

The associations produced by national airs, and illustrated by the effect of the *Rans des Vaches* upon the Swiss, are too well known to be related; and the *mal de pays*, or *nostalgia* is an affection aggravated by the fond airs of infancy and youth during the sad hours of emigration, when the aching heart lingers after home and early ties of friendship and of love. It is somewhat singular, but this disease is frequent among soldiers in countries where they are forcibly made to march: but is seldom, if

ever, observed in the fair sex, who most probably seek for admiration in every clime, and are reconciled by flattery to any region.

The whims of musical composers have often been most singular; Gluck composed in a garden, quaffing champagne; Sarti, in a dark room; Paesiello, in his bed; Sacchini, with a favourite cat perched upon each shoulder. The extraordinary fancies of Kutsevar, the composer of the 'Battle of Prague,' are too well known, and led to his melancholy, but unpitied end.

Dr. Millingen's Curiosities of Medical Experience.

Love of Music.

'Whoever despises Music' (says Luther), 'as is the case with all fanatics, with him I can never agree, for Music is a gift of God, and not a discovery of man. It keeps Satan at a distance, and, by making a man happy, he loses all anger, pride, and every other vice. After theology, I give Music the second rank and honour; and we see how David, together with all the saints, have expressed their thoughts in verse, in rhyme, and in song. Mortally I approve these two recreations and amusements—namely, music and chivalrous exercises, with fencing, wrestling, &c.; the first chasing away the cares of the heart and melancholy thoughts, the other beneficial in exercising and improving the limbs, and keeping the body in health.

'There is no recreation, if this be the proper name for it at all, which is so purely intellectual. Other amusements, many games, may exercise the intellect, and even largely draw forth its powers of forethought, of decision, and readiness; but Music appeals to the soul in those deeper springs which lie close to spiritual and moral feeling. It lifts it out of the present and visible into the future and invisible. Even in its gayer and lighter strains it does this, as well as in its more solemn and sacred chants. The simple lilt of a song which we have heard in youth, or which reminds us of home and country—some fragment of melody slight in meaning, yet exquisitely touching in sweet or pathetic wildness—will carry the soul into a higher region, and make a man feel kindred with the immortals.'

Professor Tulloch, D.D.

Loss of Memory.

In the conclusion of a lecture delivered by Professor Faraday, at the Royal Institution, he alluded, in an affecting manner, to his increasing loss of memory. 'There was a time,' he observed, 'when he inclined to think that memory was a faculty of secondary order; but he now feels its great importance; and the deficiency of that power,' he said, 'would prevent him from bringing before them anything that was new, for he was often troubled to recollect even his own previous researches, and he could no longer trust himself to lecture without notes.'

Mental Labour.

The 'Boston Journal of Chemistry' cites an interesting calculation as to the comparative exhaustion produced by mental and by muscular labour. It is reckoned that three hours of hard study wear out the body more than a whole day of bodily exertion.

Blindness.

One of those 'facts not generally known' is mentioned by Dr. Baden in a communication to the 'Revue Populaire de Paris.' It is that in every eye there is a spot necessarily afflicted with blindness, that where the nervous fibres of the retina join in a bunch to make their way to the brain. The truth of this is easily ascertained: draw a small cross on a piece of paper, then, to the right, at a distance of about two inches and a half, make a blot of about the size of a common wafer; close your left eye and fix your right one on the cross; now bring the paper slowly nearer and nearer to the eye: when it is at the distance of about eight inches the black spot will become invisible, but on continuing to approximate the paper it will appear again.

Body and Mind.

In one of the lectures delivered before the College of Physicians, by Professor Maudsley, 'On the Relations between

Body and Mind,' some remarkable phenomena illustrative of nervous action are recounted. If the head of a frog be cut off, and if the thigh be touched with acetic acid, the animal rubs the acid off with the dorsal surface of the foot on the same side. If now the foot be cut off, the animal again tries to rub the acid off with the stump. But not being able to do this, it becomes restless, and, at last, rubs it off with the foot on the opposite side. The actions seem to be guided by the same intelligence and volition which might be expected in the perfect animal, but which become remarkable when exhibited by an animal from which the recognised organ of will and intelligence has been removed.

Deformity.

In no branch of surgical science has greater advance been made within our own time than in the treatment of cases of deformity. Byron pined and chafed under a deformity which might have been removed in his childhood if his parents had had advantages which, happily, may now be enjoyed by the most humble of the community. Sir Walter Scott was also afflicted by a malformation of the foot, of which the faculty of his time could not relieve him. Since vaccination has become the rule, there is a sensible diminution in the number of persons marked with smallpox; and among the young adults of the present day there are fewer cases of club-foot than were to be found half a century ago. The old system of treating cases of club-foot was that of stretching the tendon Achillis by mechanical contrivances. It was sometimes successful; but in the majority of instances the result was unsatisfactory. A few years ago the experiment of cutting the tendon was tried, and so successful was the result that this method is now generally adopted. When the case is treated in infancy, about twelve weeks generally suffice for a cure if due attention is paid to the patient. After the tendon has been cut, instruments are applied to keep the foot in the proper position, and as in this case certainly 'nature abhors a vacuum,' the sinew is united by a new growth of tendon. It has been found that, up to about the age of 30, club-foot is more or less curable.

GOUT—INTOXICATION.

How the Gout Came.

An old Scottish gentlewoman (one of those genealogical ladies now becoming rare), would never allow that any but people of family could have *bonâ fide* gout! If it was mentioned that a *roturier* was afflicted with that disease, she would shake her head, 'Na, na! it's only my father and Lord Gallowa' that has the *regular gout!*'

In 'Blackwood's Magazine,' 1863, in a paper of surpassing humour, appeared the following:—

'That pain which you feel in the joint of your great toe,' quoth Monsieur Gout, 'has, you flatter yourself, become rather less since 8 o'clock, when you took your last dose of colchicum. Quite a mistake, my dear sir! The member is, if anything, more swollen and inflamed than before. Observe now—I shall take the liberty of inserting this little awl, just by the way of probe. Aha! it makes you wince! A very good sign that, however, since it proves that there is no ground for apprehending immediate mortification. Now, do you know why it is that your toe is so singularly sensitive? I'll tell you. You remember, three years ago, ordering a batch of burgundy! Previous to that time you had been in very good health, for you had plenty of occupation and little leisure for gluttony or wine-bibbing; your means were limited, and during the holydays you took a sufficiency of pedestrian exercise. Really, in those days I never expected to have the pleasure of making your acquaintance. I considered you just the kind of fellow likely to become an ornament of the Alpine Club. But your estimable uncle, old Jones, the stockbroker—bless you, I knew him very well indeed! many a time have I chatted to him

when he was roaring like an aggravated bullock—your old uncle Jones, I say, died and left you his money—you are not going to sleep are you? Well, I call that rather unhandsome treatment, considering that I have taken the pains to come here and bear you company. A slight touch of the pincers may, however—aha! all's right again; you are as lively as a snapping turtle! Whereabouts was I? Oh, I remember. Old Jones left you his money, and you determined to take your ease. No one can blame you for that. What's the use of fagging to make more when you are in possession of a cool 4,000*l.* a year, and may indulge in a shooting-box and hunters? But you could never make up a respectable bag on the moors, and on horseback you were anything but a Ducrow. You preferred living in town, took chambers in the Albany, gave nice little *recherché* dinners, and laid in that stock of burgundy to which I have already alluded. It was of a fine vintage, strong and heady, and made the blood circulate in the veins like lightning. To it I attribute the honour of our first introduction, though port and claret, not to mention sundry kinds of delicious *entremets*, did undoubtedly contribute to lessen the distance between us. Then you took to late hours, hot rooms, and *ecarté*, almost justly included in the catalogue of fashionable pleasures; and our acquaintance, at first only slight, has now ripened into permanent friendship. But I really must not allow my feelings to divert me from the scientific purpose for which I have visited you to-night. Don't be afraid! I shall lay aside awl and pincers, and vary the experiment by injecting a few drops of molten lead between the flesh and the bone. Ha! what an enviable yell! Your lungs, I can assure you, are in a perfectly healthy state, and may last you for the next twenty years if you don't force me to get into your stomach. By the way, what a silly proverb that is against pushing things to an extremity. It is with the extremities I always make a point of dealing in the first instance, and I take it that very few people would wish me to depart from the practice. What is it that you say? You wish that I would go to the devil. Pardon me for hinting in reply that you are both rude and un-

reasonable. I am here, as you well know, in consequence of your indiscretions.'

Archbishop Sheldon not only wished for gout, but proffered 1,000*l.* to any person who would help him to it; looking upon it as 'the only remedy for the distress in his head.'

Gout and Rheumatic Gout.

The researches into the nature of gout which Dr. Garrod has assiduously prosecuted for many years, have resulted in brilliant discoveries of pathological facts; and not in these only, for the facts are pregnant with meaning for the practical physician. Dr. Garrod has seized that meaning with great sagacity, and his large and accurate therapeutic knowledge has enabled him to devise the most hopeful means of giving it fulfilment. The cardinal facts ascertained by Dr. Garrod are substantially these:—

In true gout, uric acid is invariably present in the blood in abnormal quantities, in the form of urate of soda, both prior to, and at the period of, the seizure, and is essential to its production.

A deposition of urate of soda in the inflamed part *always* accompanies true gout, and is its infallible criterion, for it never occurs in any other disease which at first sight may seem allied to gout.

When once this urate of soda is deposited in the cartilages and ligamentous structures, it remains for a long time, perhaps during life. It is not true, however, as hitherto supposed, that the cartilage is absorbed, or destroyed, and that its place is usurped by the foreign matter. The latter is deposited in a crystalline form in the interstices of the cartilage, and may be washed out after death, leaving the cartilage whole.

The deposited urate of soda may be looked upon as the cause, and not the effect, of the gouty inflammation; and the latter as a curative effort of nature, tending to the destruction of the urate of soda in the blood of the part, and consequently of the system generally.

[This fact explains, if it does not quite justify, the old popular notion that a man is to be congratulated on his first fit of the gout, because 'it gives him a new lease of his life'—though at a rackrent.]

The kidneys are implicated in gout, and ultimately their structure is altered; the urinary secretion is also altered in composition.

An impure state of the blood, arising principally from the presence of urate of soda, is the probable cause of the disturbances which not unfrequently precede the seizure, and of many of the anomalous symptoms to which gouty subjects are liable.

The causes which predispose to gout, independently of those connected with individual peculiarity, are either such as produce an increased formation of uric acid in the system, or which lead to its retention in the blood. Probably in what is popularly called the rich man's gout, the former class of causes predominates, in the poor man's gout, the latter.

The causes exciting a gouty fit are those which induce a less alkaline condition of the blood, or which greatly augment the formation of uric acid, or such as temporarily check the power of the kidneys for eliminating this principle.

Once possessed of so full a knowledge of the nature of the disease, Dr. Garrod was able to apply old remedies to it more appropriately, and even to devise new ones, capable of neutralising the material cause of the disease, as a chemical antidote neutralises a poison; for, as our readers have perceived, it is the rare attribute of gout to possess a real *materies morbi*, appreciable in quantity, of known composition, and accessible to reagents. The fixed alkali called lithia, which Dr. Garrod has been the first to employ medicinally, has the invaluable property of uniting most readily with uric acid, and forming with it the most soluble of all the urates. Dr. Garrod has, within the last two or three years, made many trials of the salts of lithia in the treatment of uric acid gravel, and chronic gout, and he recommends them as most valuable agents in such cases, far surpassing any other in their solvent power for uric acid or urates; in addition to which their local influence is

slight, and their use does not appear to be attended with any injurious consequences.

It appears to us that as a record of successful pathological inquiry leading directly to remedial principles of the highest importance, Dr. Garrod's work has hardly been surpassed by any other which has appeared in our day.

Saturday Review.

The Scotch formerly regarded the gout as a fit punishment for the luxurious living of the English; but this *morale* is sadly spoiled by the gout existing among the poor and temperate Feroe Islanders. This is attributed to their imprudence in throwing themselves on their beds to rest without pulling off their clothes, when they come home wet; the excessive heat of their apartments, and the bad custom of sitting close to the fire, dispose them to be gouty, when exposed to the least cold or sharpness of wind.

Gout is named from *gutta*, a drop, from a fanciful notion that it arose from some morbid matter deposited by drops in the joints.

Colchicum—Meadow Saffron.

The bulbs of this plant, which grows in wet meadows, are used in medicine. A saturated vinous infusion is made by macerating an ounce and a half of the dried bulb in twelve ounces of white wine; and this vinous infusion has been, on the recommendation of Sir Edward Horme, much used in gout. The celebrated specific for gout known by the name of *Eau Medicinale d'Husson*, is said to be the vinous infusion of colchicum. It is but right to state, that the most judicious writers on gout consider these specifics as ultimately dangerous. Colchicum is a valuable remedy in rheumatism, when the inflammatory state has been modified by bleeding. Five grains of the powdered root are to be taken three times a day; and from one to two drams of the wine in cinnamon water, with a scruple of the carbonate of magnesia. An infusion or tincture of the seeds is found to have the same virtues as that of the bulb.

Dr. Macaulay.

Old Remedy for Gout.

Culpeper, who was a student of astrology as well as of physic, recommends as 'against the gout,' to take an owl, pull off her feathers, and pull out her guts; salt her well for a week; then put her into a pot, and stop it close, and put her into an oven; that so she may be brought into a mummy, which being beat into powder, and mixed with boar's grease, is an excellent remedy for gout, anointing the grieved place by the fire.

'I fancy this receipt much, it standing to good reason, that a bird of *Luna* should help a disease of Saturn; and therefore desire a dram of the powder to be taken inwardly every morning.'

Dangers of Intoxication.

Good results, under certain circumstances, follow a moderate use of fermented liquors. But the peculiar danger attendant upon the consumption of intoxicating drinks arises from the extreme sedativeness, and from the all but unconquerable strength of the drinking habit when once formed. Their peculiar malignity appears where they have once obtained a mastery in their becoming the parent and nurse of every kind of suffering, immorality and crime.

'Who hath woe?' says Solomon, 'who hath sorrow? who hath contention? who hath babbling? who hath wounds without cause? who hath redness of eyes? They that tarry long at the wine; they that go to seek mixed wine. Look not thou upon the wine when it is red, when it giveth his colour in the cup, when it moveth itself aright (sparkleth?). At the last it biteth like a serpent, and stingeth like an adder.'

Johnston's Chemistries of Common Life.

In the accidents that follow intoxication, bleeding has frequently been resorted to. Nothing can be more hazardous than this practice, justly condemned by Darwin, Trotter, and most physicians, who have had frequent opportunities of witnessing the distressing train of symptoms that inebriety brings on. Coffee and green tea will be found the most efficacious

antidotes, when no sickness prevails. Nausea is counteracted by effervescent and aromatic draughts, such as soda-water, ginger-beer, seidlitz-powder, &c. The ancients had recourse to various means to counteract the effects of wine, and among others we find olives and olive-oil, wormwood and saffron. The Greeks used a solution of salt, a common remedy among seafaring men; and the Romans surrounded their heads with leaves of various refreshing plants. When Aristotle tells us that Dionysius of Syracuse remained in a state of intoxication for eight days, we must suppose that he got drunk every morning.

Inordinate Drinking.

Sir John Sinclair relates an instance of a gentleman who, in twenty-three years, drank 35,688 bottles of port, and quaintly observes, 'In the course of his potation he resembled a cellar more than a man, and there are many cellars that never contained what this man must have done: viz., *fifty-nine pipes* of port.' In Wadd's 'Comments' on Corpulency, it is recorded of a Welsh squire, William Lewis, who died in 1793, that he drank eight gallons of ale per day, and weighed 40 stone. Some of the brewers' draymen and porters in London during the summer season, drink commonly from two to four gallons of porter, or *half and half*, daily. It is astonishing, too, what a large quantity of ardent spirits the system may be brought to bear by habit. The author knew an individual who drank ninety-two quarts of strong gin, in twenty-one successive days. He died of delirium tremens. Macnish relates the case of a young gentleman, *æt.* 26, who drank every morning before breakfast a bottle of brandy: a second between breakfast and dinner; and a third shortly before going to bed. Independently of this, he indulged in wine and whatever liquor came within his reach. Even during the hours usually appropriated to sleep, the same system was pursued—brandy being placed at the bed-side for his use in the night-time. To this destructive vice he had been addicted since his sixteenth year;

and it had gone on increasing from day to day, till it had acquired its then alarming and almost incredible magnitude.

Drunkenness.

That the ancients were in the habit of diluting their wine with water, there cannot be a doubt. The Lacedæmonians accused those who drank it of acting like Scythians—an expression introduced ever since Cleomenes the Spartan had learned to drink freely amongst them. The Thracians were also accused of this practice, which clearly proves that it was not general. Phitochorus reports that Amphictyon, King of Athens, learned to mix wine and water from Bacchus himself, on which account he dedicated an altar to the god. According to Athenæus, the dilution was of various strengths; sometimes in the proportion of one to two, at others of one to five. The Lacedæmonians used to boil their wine till the fifth part was consumed.

Mr. Coroner Wakley used to state that the maudlin tears which some persons shed in moments of intoxication, are the result of softness of the brain produced by habitual inebriety, or the persons being 'crying drunk.'

Saint Vitus's Dance,

Called by medical writers *Chorea Sancti Viti*, or simply *Chorea*, is a disease attended with convulsive motions, attacking both sexes, chiefly between the years seven and fourteen, and rarely occurring after the age of puberty. The origin of this name is said to be as follows: Some women, who were disordered in mind, once every year paid a visit to the chapel of St. Vitus, near Ulm, and there exercised themselves day and night in dancing, till they were completely exhausted. Thus they were restored, till the return of the following May, when they were again seized with a restlessness and disorderly motion of their limbs, to so great a degree as to be obliged, at the anniverversary feast of St. Vitus, to repair again to the same chapel for the sake of dancing.

This peculiar disorder, now rarely met with, was once widely prevalent in Germany and the Low Countries, where its diffusion appears to have been greatly encouraged by the fondness of the people for historical and superstitious excitement. Jan of Konigsberg, an old German chronicler, thus describes the ancing mania, as it appeared at Strasburg :

> At Strasburg hundreds of folk began
> To dance and leap, both maid and man,
> In open market, lane, or street;
> They skipt along, nor dared to eat,
> Until their plague had ceased to fright us—
> 'Twas called the plague of Holy Vitus.

The name appears to have been derived from the supposed power of St. Vitus over nervous and hysterical affections.

Erysipelas is also called St. Antony's Fire, as thus explained in a note to the 'Life of St. Antony,' by Butler. 'In 1089, a pestilential distemper, called the Sacred Fire, swept off great numbers in most provinces of France. Public prayers and processions were ordered against the scourge. At length it pleased God to grant many miraculous cures of this dreadful distemper to those who implored His mercy, through the intercession of St. Antony, especially before his relics. The church in which they were deposited was resorted to by great numbers of pilgrims, and his patronage was employed over the whole kingdom against this disease.'

Spleen.

The use of the word *spleen* is so common among our older English authors and modern French novelists when depicting English character, that the following quaint definition of it, both as a part of the human body and a disease to be cured by fit remedies, may not be uninteresting to some of our readers. It is from the pen of old Andrew Borde (the original 'Merry Andrew'!), in his 'Breviary of Health,' edition 1552: 'The 328 chapitre doth shewe of a mans Splene. Splen is the greke word. In latin it is named Lien or Liena. In Englysche it is named a mans splene whiche is a spongious substance lienge

under the short ribbes in the left syde. and it doth make a man to be mery and to laughe although melancoly resteth in the splene ; if there be impedimentes or sickness in it, as sorow, pencifulness, and care, and anger or suche lyke, maketh many men and women to haue suche impedimentes in the splene, as opilacions and appostumes and suche lyke ; melancoly meates, hard chese, and feare is not good for the splene ; and if any man be spleniticke let him use mery company and let him be let bloud of a veine named Saluatella, of the left syde ; some doth use to let bloud in a vayne named Basilica on the left syde; but I say that every thyng which doth hurte the lyuer doth hurte the splene, and euery thyng that is good for the lyuer, is also good for the splene : and who so euer wyll make the hardnes of the splene whole, fyrst take the mary of a calfe and the mary of an hart, and the fatness of an hogge, of a Capon, and of a ducke, and the oyle of sweate Almons of lyke porcion, myxe this togyther, and anoynte the regione of the splene, and drye the longes of a foxe, make pouder and eate it with figges.' In another place he writes: 'Splenatica passio be the latin wordes. In Englysche it is named the passion of the splêne.—*The cause of this impediment*: This impediment doth come by thought, anger, or care, or sorowe, of imprysonment, of feare and dreade, and for lack of meate and drynke. Also it may come of great solytudnes, or solytudnesse to study, or to be occupied about many matters.—*A remedy:* The chefest remedy for this matter is to use honest and mery company and to be iocunde and nat to muse upon no matter, but to leaue off at pleasure, and nat to study upon any supernaturall thynges specially those thynges that reason can nat comprehende, nor use not to lean, or stoupe downe to write or ride, and beware of slepe the afternone, and use the medicines, the whiche be expressed in the chapitre named Splen.'

Athenæum.

In that curious old farrago, the 'British Apollo,' we find, '*For the spleene and vomiting mellancoly—my owne.* Take capers, and first wash off the vinegar with warme water, then set them on the fier in a scillett, and let them boyle up one or

too waumes, and take them up and straine the water from them in to a cullender, and kepe them in a pipkin : take currance and wash them well, and then plumpe them on the fiere, and straine them out in to a cullender, and keep them in another pipkin ; take two spunfules or less of each of these, mix them togeather, and eate them for a breakfast, and you may drink after them. This cured mee of the sharpe vomitings which I had had 36 yeares, but it is the frequent youse of them that doth the effect. This also hath cured many of the stoppinge of the spleene who I have taught it to. I sometimes youse sallett oyle with them, but it must bee very good. I doe many times eate them with meat for a sallett, when I can not eate them in the morning.'

We could never understand the anger of Bishop Sandford against an old Scottish physician of his day who, with what is called the mild appearance of an old lion with the toothache, expressed, says the prelate, 'this charitable wish'—'I wish,' said he, 'that more people would die of diseases in the spleen, that men might know what purposes the spleen is intended to answer.' Nothing would have tempted the Bishop to trust himself in the hands of one whom he looked upon as an ogre. The wish was stigmatised as 'truly professional.' It was truly wise, though not wisely expressed. A knowledge of the uses of the spleen has saved more lives than were sacrificed when men died of splenetic disease and doctors knew not wherefore. Observation and discussion have greatly furthered this result.

POPULAR CURATIVES.

Photography and Medicine.

Photography seems to be giving its powerful aid to medicine and its attendant sciences. Dr. Sanderson, in a paper on the influence of the heart examined by the movements of respiration on the circulation of the blood, gives a plan for registering the rapidity and volume of the human pulse, by means of the pulse-motion, which is made to record itself by a series of zig-zag lines on sensitivised paper. This may be considered rather a curious than a useful application of photography; but it is scarcely necessary to say that its aid is of the greatest value to the physiologist, the physician, and surgeon. The numerous changes made in the aspect of wounds can find a faithful record by no other means, and the splendid collection in the possession of the Royal Medico-Chirurgical Society is a testimony to the value placed by the profession upon this method of illustrating their science.

The power of the sun's pencil in giving minute and subtle indications of expression in the human face has made it a valuable teaching power in psychological medicine. The power of words to explain certain types of insanity is feeble as compared with the whole aspect of the patient and the expression of his face. These the photograph can give with unerring certainty. Dr. Conolly has illustrated a valuable series of papers on the varieties of insanity by photographs of the different types, taken by Dr. Diamond from his asylum, and as an aid to diagnosis they are truly valuable.

It is suggested that, before it is too late, the art should be made subservient to recording the types of the various races of

men that are slowly disappearing as civilisation advances. The physical aspect of man is a subject photography alone is capable of illustrating.

Edinburgh Review, No. 372, 1871.

HOMŒOPATHY.

Homœopathy (a Greek word, literally 'similar or like state of feeling') consists in the administration of a medicine which is capable of exciting in healthy persons symptoms closely similar to those of the disease which it is desired to cure. It was first proposed in 1796, by a German physician named Hahnemann, who, while experimenting in 1790 on the mode of action of Cinchona bark in his own person, observed that it produced symptoms like those of intermittent fever, the disease for which this medicine is known to be an almost specific remedy. It was this circumstance which led him to adopt the opinions afterwards so zealously promulgated by him in his writings and in his public lectures at Leipzig.

Hahnemann's explanation of the efficacy of the homœopathic method is ingenious. 'Two different diseases,' he says, 'cannot destroy each other, for they affect different parts of the system; they will either continue their progress simultaneously, or the weaker will merely be arrested during the continuance of the stronger; while, on the contrary, if the morbid state secondarily excited resemble in its symptoms the original disease, it will affect the same parts of the body, 'and the two, meeting there, will destroy each other.'

The minuteness of the doses of medicine is the great peculiarity. A substance of which other physicians prescribe several grains, is given by the homœopathist in the quantity of two decillionths of a grain, or even less. An ordinary form of dose is that of a comfit of sugar, of the size of a poppy-seed, impregnated with a very weak solution of the medicine; 'but if the patient is very sensitive, it will be sufficient to let him smell once to a vial containing a comfit of sugar thus impregnated, of the size of a mustard seed.' Such doses appear, at first, ridiculously small; but Hahnemann reminds us that since

homœopathic medicines produce the same symptoms as the original disease, they must act on the same parts, and hence have greater power than substances acting on other parts of the body. Moreover, he discovered that his medicines acquire at each division or dilution a new degree of power by the rubbing or shaking which they undergo, 'so that latterly,' he says, 'I have been forced by experience to reduce the number of shakes to two, while I formerly prescribed ten to each dilution.' It is worthy of remark that Hahnemann was a disciple of Mesmer, a believer in animal magnetism, and speaks of the wonderful effects which he had seen produced by a homœopathic dose of medicine, that is to say, by one movement of the hands of the magnetiser along the surface of the body of the patient, from the crown of the head to the soles of the feet.

There can be no doubt that cures have been performed by the Hahnemannic method, but it now appears most reasonable to regard them merely as new proofs of how much may be done by the strict regulations of diet, by the powers of nature, and by the wonderful influence of the imagination upon the body. When patients are firmly convinced that they shall be cured, the cessation of nervous pains, particularly those of a hysterical nature, may, with more justice, be ascribed to the influence of the mind than to the power of infinitesimal doses of medicine.

Penny Cyclopædia.

Mr. A. Walker, in his work on Pathology, gives, in two quotations, an amusing summary of the absurdity of the Homœopathists, from which the following is an extract:

'Simpson, &c., and the leading homœopathists of New York, speak of the decided effects of the *decillionth* dilution; and the correct dilution to be obtained here of medicines prepared in Germany is the *third*, which is nearly in the proportion of one drop of the tincture to one barrel of alcohol, or one grain of the extract to 4 cwt. of sugar. Simpson, the most *judicious* writer on Homœopathy, states that his favourite dilutions are the 3rd, 6th, 9th, 12th, 15th, though he often uses the 30th.

× 100=10,000 drops, or one pound—2d dilution.
100=100,000,000, a hundred barrels—4th ditto.
100=10,000,000,000, ten thousand ditto—5th ditto.
100=1,000,000,000,000, one million barrels—6th ditto.
100=100,000,000,000,000,000, one hundred thousand million barrels—8th ditto.

So that by the time we reach the 30th dilution it would form a mass of *alcohol larger than the whole solar system!* One drop of the tincture, diffused through all the waters of the Atlantic, would be a stronger solution than the 8th!

'Such are the doses recommended in homœopathic writings! vide "New York Journal of Medicine."

'The dose of opium recommended by Hahnemann is *two decillionth parts of a grain.* Now the diameter of the earth is about 8,000 miles. The population of the world is about 800,000,000. A homœopathic dose of medicine amounts to two decillionth parts of a grain. From one grain of opium divide an atomic particle, which shall bear the same proportion to a whole grain that a sphere a thousandth part of an inch in diameter bears to our globe; divide the particle among the whole population of the world; cause each person to swallow a homœopathic dose *every second*, and it would require 20,000,000 of years for them to swallow the particle described. Hahnemann says he has seen a drop of nux vomica at the decillionth degree produce exactly half the effect of another at the quintillionth degree: and then he adds, 'If the patient is very sensitive, it will be sufficient *to smell a phial that contains one of these globules.* [It should be explained that the drug is made up into globules with sugar.] After the patient has smelled to it, the phial is to be corked up for future use.'

By the third calculation, made on the prescription of giving a *trillionth of a grain of capsicum in a drop of spirits of wine*, it is proved that it would require above 32,600 pyramids (like the great pyramid) to contain spirits of wine sufficient to dilute one grain of capsicum!

Homœopathy is said to be a modern discovery; but Milton, in his preface to 'Samson Agonistes,' alludes to it as practised

in his time. (Tragedy) 'therefore said by Aristotle to be of power, by raising pity and fear, or terror, to purge the mind of those and such like passions; that is, to temper and reduce them to just measure with a kind of delight, stirred up by reading or seeing those passions well imitated. Nor is Nature wanting in her own efforts to make good his assertion: for so in physic, things of melancholie hue and quality are used against melancholy, sour against sour, salt to remove salt humours.' Hahnemann himself quotes Hippocrates in confirmation of the truth of his system; but the allusion to it by Milton shows that it was very generally known in his times.

Notes and Queries, 3rd Series, No. 235.

Cold Bathing, and Cold-Water Cure.

The Emperor Severus, who died in England, A.D. 213, practised cold bathing for the gout, and Sir Henry Coningsby, who lived to the age of eighty-eight, imputed his long life to forty years' cold bathing. And William Harvey was much and often troubled with the gout, and his way of cure was thus: 'he would then sitt with his legges bare, if it were frost, on the leads of Cockaine House, putt them into a payle of water, till he was almost dead with cold, and betake himself to his stove, and 'twas gone.'

John Locke recommends the washing of the feet in cold water to prevent corns. Sir John Floyer, the celebrated physician of Lichfield, who wrote an 'Essay on Cold Bathing,' in 1702, maintains that we may learn the benefits of cold immersion in cold water from the practice of the lower animals. Ælian states that pigs, when convulsed by eating henbane, go into the water and, by drinking it, recover; whence we may learn the use of cold baths in narcotic poisons and sleepy diseases. Our water-fowl commonly wash themselves in wet weather; and Celsus recommends the use of cold baths against rainy seasons, to cure the pain of the limbs, and the dulness of the senses occasioned before rains.

Canary-birds are subject to convulsions, and are usually cured by immersing them in cold water. Sir John Floyer was

informed by a lady, whose lapdog he had seen in convulsions, that it was cured of them by being thrown into a tub of water; and he adds: 'By these two instances we may observe the usefulness of cold baths in convulsions.' Sir John further tells us that in Staffordshire, at Willow Bridge, the people go into the water in their shirts; and when they come out, they dress themselves in their wet linen, which they wear all day, and much commend for closing the pores, and keeping themselves cool; and, adds Sir John, 'that they do not commonly receive any injury, or catch any cold thereby, I am fully convinced, from the experiments I have seen made with it.' Thus we had the cold-water cure a century and a half ago. Half a century later, Horace Walpole, in a letter to Mr Cole, dated June 5, 1775, says: 'Dr. Heberden (as every physician, to make himself talked of, will set up some new hypothesis) pretends that a damp house, and even damp sheets, which have ever been reckoned fatal, are wholesome. At Malvern, they certainly put patients into sheets just dipped in the spring.'

Sir John Floyer seems to have found the golden mean of happiness. He preserved his health and spirits to the advanced age of ninety, four years previous to which he visited Bishop Hough, at Hartlebury. The Bishop's neighbours were all surprised to see a man of that age, with his memory, understanding, and faculties perfect; and appearing to labour under no infirmity. In compliance with the wishes of a party of young folks, he communicated his receipt for preparing the *elixir vitæ*; and informed them that, by attention and habit, he obtained so great a command over his temper, as never to be moved with anything that he could not hope to remedy; and by this, and a constant disposition to enter into the innocent amusements and enjoyments of others, he had extended his life to that period in peace and comfort.

Priesnitz's Cold-Water Cure.

Vincenz Priesnitz, the founder of hydropathy, or water-cure, was a native of Gräfenburg, in Austrian Silesia, where his father was a farmer. He was several years employed on the

farm; but one day, a restive horse seized Priesnitz with his teeth, threw him down, and dragging a loaded cart over him, broke two of his ribs. A medical man, after examining him, expressed an opinion that the injuries sustained were so great that, even if he recovered, he would be a cripple for life. Priesnitz, however, by placing his body in a certain position, which allowed him to expand his chest to the utmost extent, replaced his ribs, and by the free use of cold water, kept down inflammation, so that in a short time he was able to return to his work. The process of cure by cold water, which had been so beneficial in his own case, was successfully used in other cases of inflammatory disorders. His reputation gradually extended: he studied medical books, formed a sort of system of medical treatment, established cold-water baths at Gräfenberg, and in 1826 patients began to resort to him from different parts of Germany. No particle of medicine, vegetable or mineral, no tonic, no stimulant, no emetic, no purgative, was ever administered in any form whatever. No 'bleeding, blistering, or leeching' was employed. Water variously applied, externally as well as internally, the process of sweating, fresh air, out-door exercises, plain diet, regulated clothing, early hours, and cheerful society, constituted the only remedies. This system continued in successful operation till the death of Priesnitz, of dropsy on the chest, on November 28, 1851, at Gräfenberg.

Sea-Water Baths.

The salutary medicinal effects of sea-bathing are generally acknowledged, although too frequently recommended in cases which do not warrant the practice; in such circumstances they often prove highly prejudicial. The ancients held sea-water baths in such estimation that Lampridius and Suetonius inform us that Nero had it conveyed to his palace. As sea-bathing is not always within the reach of those who may require it, artificial sea-water has been considered a desirable substitute; and the following mode of preparing it, not being generally known, may prove of some utility. To fifty pounds of water add ten ounces of muriate of soda, ten drachms of

muriate of magnesia, two ounces of muriate of lime, six drachms of sulphate of soda, and the same quantity of sulphate of magnesia. This is Swediaur's receipt. Boullon, Lagrange, and Vogel recommend the suppression of the muriate of lime and sulphate of soda, to be replaced with carbonate of lime and magnesia; but this alteration does not appear necessary, or founded on sufficient chemical grounds for adoption.

Sea-water taken internally has been considered beneficial in several maladies; and, although not potable in civilised countries, it is freely drunk by various savage tribes. Cook informs us that it is used with impunity in Easter Island; and Schouten observed several fishermen in the South Sea drinking it, and giving it to their children, when their stock of fresh water was expended. Amongst the various and capricious experiments of Peter the Great, an edict is recorded ordering his sailors to give salt water to their male children, with a view of accustoming them to a beverage which might preclude the necessity of laying in large stocks of fresh water on board his ships! The result was obvious: this nursery of seamen perished in the experiment. Russel, Lind, Buchan, and various other medical writers, have recommended the internal use of sea-water in scrofulous and cutaneous affections; but its use in the present day is pretty nearly exploded.

Pepsin.

If Pepsin is introduced, even in very small quantities, into the stomach, at the time of taking food, the operations of nature will be wonderfully facilitated. M. Boudalt has succeeded in preparing Pepsin from the rennet-bags used in making cheese. It is a syrupy solution, which, being mixed with starch and dried, forms a greyish powder, and is either used by itself, or mixed with re-agents which do not affect its digestive properties. Thus prepared, Pepsin can be taken either in water, or between slices of bread; and according to Dr. Ballard, who introduced it into London practice, it is capable of representing and replacing the normal gastric juice of the

human body: and it not only acts *per se* on the food, but restores the lost activity of the secretive organs. Among the cases recorded by Dr. Ballard is that of a lady, sixty-six years of age, who for four years had suffered pain, which 'she had no words to describe,' for three or four hours after every meal. The natural consequences were excessive prostration and complete disgust for food; and she had for many weeks limited herself to four rusks and a little milk and beef-tea per diem. The first day Pepsin was used she ate and enjoyed a mutton-chop; in a few days she ate freely, and gradually improved, and at length was able to give up the Pepsin entirely, as well as to eat without pain, and walk some miles without fatigue.

Mustard Seed.

'A grain of mustard seed' is said in the parable to be 'the smallest of all seeds; but when it is grown up, it is the greatest among herbs, and becometh a tree, so that the birds of the air come and lodge in the branches thereof.' The mustard of our own country is very far from answering this description: but there is in the East a species of *sinapi*, to which it, no doubt, alludes; it is called by Linnæus *Sinapi crucoides*. Its branches are real wood, as appears from a specimen once in the collection of Sir Joseph Banks. Lightfoot, Buxtorf, and others quote the Jewish Rabbis to the same effect, whose testimony cannot be suspected of partiality to the New Testament. In the *Talmud of Jerusalem* it is said, 'There was in Sichi a mustard-tree, which had three branches, one of which, being cut down, served to cover the hovel of a potter; and yielded three *cabs* of seed.' The Rabbi Simeon says, 'he had in his garden a shoot of the mustard-tree on which he climbed as if on a fig-tree.' These statements are, at least, sufficient to show that we should not form a judgment of Eastern herbs by those which are familiar among ourselves.

The seeds of the white mustard, taken whole, have long been used in a variety of complaints, and some persons have been very sanguine as to their power in a great many more. They have been given as a stimulant to the stomach, and to the

system in general in cases of palsy. They act as a tonic and mild laxative, probably very much from their mechanical effects, as, like other seeds, they pass through the intestines unchanged; only the outer covering being somewhat softened and parting with a quantity of mucilage. Mustard-seed is certainly very harmless, and may be tried in various diseases of debility and indigestion. It may be taken to the extent of a teaspoonful three times a day, in a little milk, gruel, or water. It is to be swallowed whole, and not broken or masticated.

Bitters.

There are many vegetable substances possessed of bitter taste, which are highly useful both in diet and medicine. They produce a powerful effect on the digestive organs, and through them on parts of the system. Bitters seem to be absolutely necessary to promote digestion in animals who live on herbs, as cattle do not thrive upon grasses which do not contain a portion of bitter principle. In man, slight bitters produce invigorating effects on the stomach; and their presence in malt liquors not only renders such liquors less injurious to the system, but also, when taken in moderation, assistant to digestion. Bitters stimulate the stomach, correct unwholesome food, and increase the nourishing powers of vegetables.

The purest bitters, and those which are most used as medicines, are chamomile flowers, gentian, quassia, and colombo.

Chamomile flowers are used in the form of infusion, made by pouring a quart of boiling water on a handful of the dried flowers. Of this infusion, a teacupful may be drunk twice a day.

There are different ways of using *gentian*. The infusion of the root in hot water is one of the most agreeable bitters we can employ; and the flavour will be improved by infusing along with the gentian some orange-peel or the rind of lemons; from one to two ounces may be taken twice a day. The extract of gentian is used in the dose of from ten grains to thirty, made into pills. There is a wine of gentian made by macerating,

for twenty-four hours, in proof spirit, four ounces of the following ingredients: half an ounce of gentian root, an ounce of Peruvian bark, two drams of dried orange-peel, and an ounce of canella bark. After the maceration, add two pints and a half of white wine; of this take one or two dessert-spoonfuls twice a day. The tincture of gentian is also much employed. The principal objection to using bitters in the form of wine or tincture, is the resemblance which such practices bear to dram-drinking, and the danger of inducing that habit.

Quassia is an excellent bitter, a dram of the bark and wood of the plant being infused in a pint of water; a cupful drunk several times a day.

The *Tonic Cup*, now in our chemists' shops, is no novelty: in South America basins have long been made of the wood of quassia, for dyspeptic persons, the wood communicating its bitterness to the beverage put into it, and thence proving tonic.

Colombo may be used in powder or in tincture; ten grains of the former, and a tea-spoonful in a glass of water of the latter.

A cupful of chamomile tea when cold, taken in the morning before breakfast, is a good aromatic, and helps to restore the tone of the bowels.

Properties of Tonics.

Tonics restore strength, and give general tone to the system. Unlike that of stimulants, their action is permanent. There are tonics which consist of vegetable bitters, which cure ague and periodic fever, and are useful in debility. Cinchona bark, and its alkali, quinine, are by far the most useful of these. Less expensive than other bitters are colombo, quassia, gentian, orange-peel, tansy, and sage. The last two form good fever drinks for the poor. The other kind of tonics consist of the compounds of iron, and excel all other tonics in debility associated with paleness.

Dr. Headland's Medical Handbook.

The History of Quinine.

It has always been denied that the Indians themselves were aware of the value of this precious commodity, but, as Mr. Markham observes, their very name for the tree which produced it *quina-quina*—'bark of bark'—indicates that it was believed to possess some special medicinal properties. It is suggested that the Indians, looking upon their conquerors with dislike and suspicion, were indisposed to impart to them such knowledge as they did possess. But, on the other hand, there is no doubt that to this day the Indians evince a repugnance to the use of quinine, on account of what they consider its heating properties, which, in their opinion, restrict its employment to our northern climate. It was first designated chinchona, not cinchona, as we now term it, in honour of a certain Countess of Chinchon, who was the wife of a Spanish Viceroy of Peru. This lady, in 1638, was cured by it of an intermittent fever, and Linnæus, long afterwards, named the whole genus of quinine-yielding trees in her honour. The Countess, after her cure, brought some of the bark to Europe, where it was sometimes called 'Countess's bark,' and sometimes 'Countess's powder.' The Jesuits subsequently undertook its distribution, through the agency of the Cardinal de Lujo, whence it was known by the names of 'Jesuits' bark' and of 'Cardinal's bark.' It was a ludicrous result of its patronage by the Jesuits that its use should have been for a long time opposed by Protestants and favoured by Roman Catholics, but so it was. The controversy which supervened between rival physicians as to its value as a medicine was only a little less animated and absurd. But its crowning literary interest was the composition of a poem by La Fontaine in 1726, at the solicitation of the Duchess of Bouillon, who had been cured of a dangerous fever by taking it, and who produced a poem in two cantos to celebrate its virtues. In 1743 La Condamine attempted to transport some young plants of it to the Jardin des Plantes at Paris, but after bringing them 1,200 leagues the box in which he had preserved them for more than eight months was washed away at the mouth of the Amazon. Jussieu, the botanist, his com-

panion in botanical researches, who remained in South America after his associate had departed, was still less fortunate, inasmuch as he was robbed of his collection of plants by a servant at Buenos Ayres, and the loss had such a disastrous effect on him that he returned to France deprived of reason, after an absence of thirty-four years. Such are the incidents of the heroic age of quinine, to which we have nearly had to append the calamitous sequel that this drug of great price was departing from the world for ever.

The manner in which it was originally collected, and which is described by Mr. Markham, is curious. In the flourishing times of the Huanuco bark trade, the *cascarilleros*, or bark collectors, entered the forests in parties of ten or more, with supplies of food and tools. They penetrated for several days into the virgin forest until they came to the region of the cinchona trees, where they built some rude huts and commenced their work. The *cateador*, or searcher, then climbed a high tree, and, with the aid of experience and sharp sight, soon discovered the *manchas*, or clumps, by their dark colour, and the peculiar reflection of the light from their leaves, easily observable even in the midst of these endless expanses of forest. The *cateador* then, with never-erring instinct, conducted the party through the tangled brushwood to the cinchona clump, using the wood-knife at every step. From a single clump they often obtained 1,000 pounds of bark, which was sent up to be dried beyond the limits of the forest. All depended on the success of this operation, for the bark easily becomes mouldy, and loses its colour. The *cascarilleros* got from the speculator two rials for every 25 pounds of green bark stripped, and, as they could easily strip 300 pounds, they made $2 a day. The bark cost the speculator about $2, and the price at Lima was $16 to $20 the arroba of 25 pounds. The collection of this bark from the first was, however, conducted with reckless extravagance. No attempt was made at the cultivation or conservancy of the cinchona trees, and the complete abandonment of the forests to the speculator, as in Peru, Ecuador, and New Granada, and the meddling legislation of Bolivia, led to equally destructive results. A century

ago, Condamine raised a warning voice against the destruction that was going on in the forests of Loxa. Ulloa advised the Government to check it by legislation. Soon afterwards Humboldt reported that 25,000 cinchona trees were destroyed every year, and Ruiz protested against the custom of barking the trees and leaving them to rot. It appears that if the trees had been felled as near as possible to the root, an aftergrowth might have been calculated upon after six years in the milder regions, and after twenty years in cold and exposed localities. But there is danger of the actual extirpation of the trees from the practice pursued of stripping them of their bark and then leaving them standing. In such cases they are attacked by rot with extraordinary rapidity; hosts of insects penetrate the stem to complete the work of destruction, and the healthy root becomes infected. Thus one valuable species has really been almost exterminated.

From the Times Journal.

Cure for Cancer.

A multitude of strange remedies are prescribed for cancer. When Lord Metcalfe, the Governor of Canada, was beset with this cruel disease, Mr. Kaye, his biographer, tells us: 'One correspondent recommended mesmerism, which had cured Miss Martineau; another hydropathy, at the pure springs of Malvern; a third, an application of the common dock-leaf; a fourth, an infusion of couch-grass; a fifth, the baths of Docherte, near Vienna; a sixth, the volcanic hot springs of Karlsbad; a seventh, a wonderful plaster made of rose-leaves, olive-oil, and turnip-juice; an eighth, a plaster and powder, in which some part of a young frog was a principal ingredient; a ninth, a mixture of copperas and vinegar; a tenth, an application of pure ox-gall; an eleventh, a mixture of Florence oil and red precipitate; whilst a twelfth was certain of the good effects of homœopathy, which cured Charlotte Elizabeth. Besides these varied remedies, many men and women with infallible recipes, or certain modes of treatment, were recommended by themselves and others. Learned Italian professors, mysterious

American women, erudite Germans, and obscure Irish quacks —all had cured cancers of twenty years' standing, and all were pressing or pressed forward to operate on Lord Metcalfe. Dr. Brandini, of Florence, has discovered that citric acid will assuage the violent pain which is the usual concomitant of cancer. One of his patients, aged seventy-one, at the hospital of Santa Maria della Scala, was afflicted with cancer on the tongue. The poor man, in the midst of his torments, asked for a lemon, which was nothing very remarkable, as cancerous patients generally have an extraordinary liking for acids. But the seat of the disorder being in the mouth, a circumstance was observed which might otherwise have escaped attention—the juice of the lemon diminished the pain. The patient, on finding this, asked for another on the following day, and it gave him still greater relief than the day before. This led Dr. Brandini to try citric acid itself in a crystallised state. A gargle was composed of four grains of the acid in 350 grains of common water, and it entirely carried off the pain; on its reappearing, the same remedy was repeated with the same success.

Sea-Sickness.

Creosote is a remedy for sea-sickness. About half an hour before you embark, take three drops in a small quantity of water. When on board, if you feel a little nausea, pour two or three drops on a lump of sugar and swallow it, repeating it every hour if the nausea continues, or if sickness comes on after the stomach has been relieved. Be careful not to exceed the small quantity of creosote we have mentioned. Soup, strongly seasoned with Cayenne pepper, is, however, a better preventive for sea-sickness.

Who will try the old homœopathic 'remedy how they that are not accustomed to passe the sea may auoyde perbreaking or casting? He that will passe the sea, must (a few dayes before hee take shipping) mingle the sea-water with his wine. This is a remedy for them that be rich; but if it bee a poor man, then he must drinke sea-water onely, that hee may the

easier eschew casting. The reason hereof is, because the sea-water is salt, and so with his saltnesse and stipticitie that followeth saltnesse, it closeth the mouth of the stomacke, and thereby auoydeth casting.'

Schoole of Salerne.

Manufacture of Cod-Liver Oil.

The process of manufacturing the far-famed cod-liver oil at Portugal Cove, Newfoundland, is described in the 'St. John's Telegraph.' The livers of the cod are sold by the fishermen to the manufacturer of the oil at the rate of 24 cents a gallon. On the average it requires 2½ gallons of liver to produce a gallon of oil. The livers are first carefully washed, and must be 'cooked' at once, while fresh. They are first put into a large tin boiler. This is plunged into a larger iron boiler filled with hot water, the water not being allowed to touch the livers, which are thus gently steamed till a quantity of oil is floating on the surface. This is dipped out and filtered through blanketing first; then twice afterwards it is filtered through bags of moleskin. From the last filtration it comes out of a beautiful crystalline transparency, and without any unpleasant smell or taste. The oil is now poured into 60-gallon casks, and forwarded to the exporting merchant. The refuse is placed under screw presses and the remainder of the oil extracted. This is not refined, but sold as common cod oil, and is used largely on railways and for lubricating machinery. The cod-liver oil has gone up in price lately, owing to the immense demand for it in Europe, and now it is sold to the merchant at the rate of 130 cents a gallon. Last year 330 tuns of it were exported, the value being 260 dollars per tun. Of the common cod oil, unrefined, 4,521 tuns were exported, the value being 144 dollars per tun. So plentiful has been the catch of cod that in one factory 2,000 had been barrelled before the season was half through. The men who handle it get quite a liking for the oil. A little dog running about the premises laps it eagerly. The secret of making good cod-liver oil lies in the application of the proper degree of heat—too much or too little will seriously

injure the quality. Great attention to cleanliness is also necessary, the filtering bags requiring to be washed thoroughly every day, and the troughs scrubbed out with great care. The rancid oil that is frequently met with is the produce of manufacturers who are careless about these matters. The best oil is made in the way above described; and all the pretences of quacks about refining it, and making it palatable, are, it is declared, mere moonshine, and either covers for adulteration, or such as deprive the oil of its medicinal properties. There is, no doubt, an enormous amount of adulteration practised by the retailers of cod-liver oil, but it is maintained that it is not done in Newfoundland. The greater part of the oil goes to London, and there it is 'doctored.' The writer in the St. John's paper states that were a person, with competent skill and capital, to embark in the manufacture in Newfoundland on an extensive scale, and bottle the oil on the spot for the retailers, guarding it by a label and other securities, and guaranteeing a pure article of the best quality, his oil would speedily take the lead in the market.

Housemaid's Knee.

Mr. Richard Davy, in a communication to the 'Medical Journal,' remarks, that during the past year twenty-one cases of this affection have been registered as in-patients at the Westminster Hospital (one man and twenty girls), demonstrating that some mechanical improvements are needed in the common scrubber's necessaries. He maintains that it is an unnecessary and quite a cruel custom that servants should subject their knees to the cold pavement or damp floor, and their bursæ to continued pressure, to insure a clean doorstep, a bright hearth, or a polished floor. Yankee servants, who have too much pride to knuckle down and clean their halls, use the American squeegg-brush, or a long-handled mop; the women in Holland clean their steps with an appliance combining the brush and wiper; the Parisian garçon waxes his floor with a footbrush, and so on. Let, therefore, our poor English girls be supplied with brushes and wipers that can be used in the erect posture.

Then our housemaids will be eased of a frequent and painful, if not a dangerous affection: our hospitals will be provided with more empty beds; and employers will be spared the inconvenience of sending their broken-kneed drudges into the wards of the nearest charitable institution.

Accident to Mr. Brunel.

Mr. Brunel, the celebrated engineer, had several narrow escapes with his life; but the most extraordinary accident which befell him was that which occurred while one day playing with his children, and astonishing them by passing a half-sovereign through his mouth out at his ear. Unfortunately, he swallowed the coin, which dropped into his windpipe. The accident occurred on April 3, 1843, and it was followed by frequent fits of coughing, and occasional uneasiness in the right side of the chest; but so slight was the disturbance of breathing, that it was for some time doubted whether the coin had really fallen into the windpipe. After the lapse of fifteen days, Sir Benjamin Brodie met Mr. Key in consultation, and they concurred in the opinion that most probably the half-sovereign was lodged at the bottom of the right bronchus. The day after, Mr. Brunel placed himself in a prone position on his face upon some chairs, and, bending his head and neck downwards, he distinctly felt the coin drop towards the glottis. A violent cough ensued, and on resuming the erect posture he felt as if the object again moved downwards into the chest. Here was an engineering difficulty, the like of which Mr. Brunel had never before encountered. The mischief was purely mechanical; a foreign body had got into his breathing apparatus, and must be removed, if at all, by some mechanical expedient. Mr. Brunel was, however, equal to the occasion. He had an apparatus constructed, consisting of a platform which moved upon a hinge in the centre. Upon this he had himself strapped, and his body was then inverted in order that the coin might drop downwards by its own weight and so be expelled. At the first experiment, the coin again slipped towards the glottis, but it caused such an alarming fit of con-

vulsive coughing and appearance of choking, that danger was apprehended, and the experiment was discontinued. Two days after, on the 25th, the operation of tracheotomy was performed by Sir Benjamin Brodie, assisted by Mr. Key, with the intention of extracting the coin by the forceps, if possible. Two attempts to do so were made without success. The introduction of the forceps into the windpipe on the second occasion was attended with so excessive a degree of irritation that it was felt the experiment could not be continued without imminent danger to life. The incision in the windpipe was, however, kept open, by means of a quill or tube, until May 13, by which time Mr. Brunel's strength had sufficiently recovered to enable the original experiment to be repeated. He was again strapped to his apparatus; his body was inverted; his back was struck gently; and he distinctly felt the coin quit its place on the right side of his chest. The opening in the windpipe allowed him to breathe while the throat was stopped by the coin, and it thus had the effect of preventing the spasmodic action of the glottis. After a few coughs, the coin dropped into his mouth. Mr. Brunel used afterwards to say that the moment when he heard the gold piece strike against his upper front teeth, was, perhaps the most exquisite in his whole life. The half-sovereign had been in his windpipe for not less than six weeks.

Remedy for Choking.

Pepys records in his 'Diary':—2d (November, 1667). To the king's playhouse. The house full of Parliament men, it being holiday with them; and it was observable how a gentleman of good habit, sitting just before us, eating of some fruit, in the midst of the play did drop down as dead, being choked; but with much ado Orange Moll did thrust her finger down his throat, and brought him to life again.' This case is clear and practical enough. It has lately been shown that, when a foreign body lodges in the upper part of the trachea, or in the larynx, the symptoms may be those of extreme distress and impending suffocation, or they may be of a slighter character. Where it is

lodged further downward in the trachea, or in the bronchus, they are commonly less severe; but where the patient falls, as if choked at once, the substance is almost certain to be lodged either above or between the vocal cords, where it is generally within reach of the finger. Sudden suffocation has also, in some rare instances, been known to occur from the lodgment of a large mass of food, etc., in the œsophagus.

In cases of small, hard substances, sometimes swallowed by children, they are frequently expelled by suddenly turning the child's head and body downwards, or by fastening them to a plank placed over an upright, as children do in playing see-saw, with head downwards, then bringing the head down with a smart blow to the ground. The half-sovereign swallowed by Mr. Brunel, whilst at play with his children, was dislodged in this way, after many other attempts had failed.

Mr. Brunel had more perilous escapes from violent death than fall to the lot of most men. He had two narrow escapes from drowning by the river suddenly bursting in upon the Thames-Tunnel works. During the Great Western Railway inspection, he was one day riding a pony rapidly down Box-hill, when the animal stumbled and fell, pitching the engineer on his head; he was taken up for dead, but eventually recovered. One day, when driving an engine through the Box-tunnel, he discerned some light object standing on the same line of road along which his engine was travelling; he turned on the full steam and dashed the object (a contractor's truck) into a thousand pieces. When on board the 'Great Western' steamship, he fell down a hatchway into the hold, and was nearly killed. But the most extraordinary accident which befell him was that detailed above.

DIETETICS.

Abstinence from Food.

Although total abstinence from food for any length of time, except with hybernating animals, is a wondrous phenomenon, yet it is singular how little aliment is necessary to sustain life, and even health. Many instances of a frugality bordering upon starvation are known. The most economical housekeeper on record was Roger Crabb, the Buckinghamshire hermit, who allowed himself three farthings a week. Dr. Franklin lived on bread and water for a fortnight, at the rate of ten pounds of bread per week. Dr. Gower, of Chelmsford, had a patient who lived for ten years on a pint of tea daily, now and then chewing half a dozen almonds and raisins, but without swallowing them; once a month, by way of a treat, she ate a morsel of bread, the size of a nutmeg.

The Duke of Portland, after a long illness, during which he was attended by Dr. Warren, lived on bread and water for six weeks, at the expiration of which he was allowed *one boiled smelt.* Numerous persons have been known to live to old age in perfect health, who never used animal food or wine; such was Dr. Herquet, the Sangrado of Le Sage, who published a curious treatise on fasting in Lent 1709.

The following lines were written on a man named Offley:—

> Offley three dishes had of daily roast—
> An egg, an apple, and the third a toast.

Most unquestionably, if this Offley was not a man of hard labour, or who took much exercise, this diet, scanty as it may appear, would have been quite sufficient to support life; for his fare was sumptuous, compared to the diet prescribed by St. Theresa to her Carmelite nuns, and which consisted of one

egg, herb soup, with wormwood ashes and aloes. The wondrous fastings of hermits and holy men must be taken *cum grano salis.*

Influence of Diet on Life.

It is certain that Cornaro the Venetian, who, having lived too fast till the age of forty, became amazingly abstemious, was a centenarian. He had a modern imitator, one Wood, a miller of Billericay, who, from gluttony, took to asceticism, and was reported in good health in 1771, being in his fifty-second year. Did he rival Cornaro in longevity? Wood's pulsations were about forty-five a minute. Does not this slowness show that he was in a torpid state, living rather like a tortoise than a man?

Notes and Queries, 4th Series, No. 223.

Ptisan.

This is a diluent drink which makes a great figure in the dietetic precepts of the ancients. Ptisan strictly signifies an extract, and was originally applied to barley which was boiled till it began to swell, then was dried in the sun, and again bruised. A decoction was made of this prepared barley, and used as a drink in feverish disorders. Other drinks of a similar kind were called *Ptisans*, though not made of barley; and Horace tells his rich miser that he requires a ptisan of rice. The term is not much used by medical men in this country. In France, it seems to be a genuine name for diluent drinks.

Asses' Milk.

This has been much famed for its virtues in consumptions and other diseases of debility. Its advantage arises from its containing a considerable portion of nutritious matter easily converted into chyle, and having less cheesy matter than other milk. It bears a stronger resemblance to human milk than any other; and it contains more sugar than that of the cow. Its proportion of acid is also very considerable. The quantity

taken may be from half an English pint to one pint daily. Rum taken in milk in consumptive cases is by no means a safe practice, as the rum is apt to bring on inflammatory symptoms.

Preserving Meat.

Various means are resorted to for retarding animal putrefaction: a reduction of temperature is by far the most efficacious. Meat, when put into snow or ice, may be kept almost any time; hence the common practice of sending fish to a distance packed in it. In cold countries, also, a store of provisions is laid up, surrounded by snow; in which state it remains till required for use. Depriving animal matter of its moisture is another mode of preventing putrefaction. We find, accordingly, that dried fish may be kept for a long time. In some countries, it is also the custom to cut flesh into thin slices, and dry it gradually, by which it may be preserved till provisions can be otherwise procured.

There are many substances that retard putrefaction, some of which, it is supposed, act merely by absorbing the moisture of the animal matter. The most powerful of them is common salt, which is used in great quantities for preserving butcher's meat, fish, butter, &c. Pyroligneous acid has been highly recommended. It is even said that it will render sweet, animal matter that has become putrid. In using it, the meat is dipped in, and almost instantly removed. Should it have become putrid, it may be left in for a few minutes.

Other means have also been practised for preventing putrefaction. The complete exclusion of air, it is well known, retards it: hence the custom of rubbing eggs with salt butter, and of keeping them in lime water. Flesh is also sometimes preserved in this way, for which purpose it is put into a cask made as air-tight as possible. It has been found also, that by boiling meat for some time, and then putting it into barrels, it may be kept long without putrefying; and hence a practice often resorted to in long voyages.

Dr. Fyfe's Elements of Chemistry.

Fish Food.

Professor Agassiz says that fish is a kind of food which refreshes the system, especially after intellectual fatigue. There is no other article that supplies the waste of the head so thoroughly as fish diet. Fish contains phosphorus to a large extent—a chemical element which the brain requires for growth and health. Yet in India an imbecile person is commonly said to be a fish-eater.

Geneva and Gin.

Geneva is a spirituous liquor which is frequently confounded with gin. It is, however, a fermented liquor which bears the same relation to gin that wine does to any distilled spirit. It is procured by the fermentation of the common juniper berry, which consists of a peculiar saccharine principle (which exists to the amount of about 33 per cent. along with acetate of lime), and a volatile oil which is contained in ten peculiar cells, which lie close to the seeds; on the oil assuming a resinous state in old berries, these cells may be easily seen in such specimens. The green one-year-old berries contain much more volatile oil, and are to be preferred to the ripe berries. The oil rarely exceeds 1 per cent.; from the quantity of sugar which the berries contain, they can easily be caused to ferment and yield a spirit, or vinegar may be made from them. Geneva is a very powerfully stimulating liquor, containing a large proportion of alcohol. The volatile oil having a special action on the kidneys, renders it the most proper cordial in cases of dropsy from debility, or even connected with diseased heart, when the system requires support. The flavour is attempted to be communicated to English gin, by adding oil of turpentine to brandy; but it is very inferior.

Sir John Hill describes gin as 'a kind of spirit distilled from the juniper berry. What is commonly sold is no better an ingredient than oil of turpentine put into the still with a little common salt and the coarsest spirit.' This shows the adulteration of gin to have been common a century since. Pure gin

should consist, as Hollands does, solely of rectified corn-spirit flavoured with juniper-berries; but Dr. Hassall shows that, in Britain, gin is flavoured with various other substances, as coriander, cardamom, and carraway seeds, grains of paradise, angelica-root, crushed almond-cake, liquorice-powder, orange-peel, which ingredients form what is known in the trade as 'gin-flavouring' and 'the doctor.' West-country, or Plymouth gin, is flavoured with German juniper-berries, calamus-root, and sulphuric acid.

Capillaire.

This is a syrup made of Maiden Hair, a genus of fern, of which there is only one species belonging to Great Britain, which is found in Scotland and Wales, on rocks and moist walls, and which is a native of the South of Europe and the Levant. This is a very succulent plant, yielding almost its whole weight of juice; but neither its taste nor smell promises any efficacy. If the syrup of capillaire which is made from it be good for anything, it is from the orange-flower water that is put into it. The Canadian Maiden Hair is the best.

Capillaire belongs rather to cookery than to medicine, and it is a pleasant demulcent to be taken during a cold. Mrs. Dalgairns, in her *Cookery*, directs: 'Put one ounce of the North American Maiden Hair into a small quantity of boiling water to infuse like tea; add a pound of sugar to the infusion; clarify it with the white of an egg, and boil it to a thick syrup; strain it through a cloth, and when cold, put in a little orange-flower water, and bottle it. That which is commonly sold as capillaire in England, is simply syrup flavoured with orange-flower water.'

'Sallets.'

When did ladies' *vinaigrettes* become the pretty things they are? Cotgrave's definition of the word in 1611, is 'Sallets or sawces which be seasoned with much vinegar; any hearbs or fruits in pickle.' The same writer notices the excellence of French bread,—'Pain tant qu'il dure, vin à mesure. Prov. Eat

bread at pleasure; drink wine by measure,—a precept which the French observe in the first (if not always in the second) part; for no people eat more bread, nor have better bread to eat, than they.'

Salad in France.

Salad is of such general use in Paris that there are many families who will not deprive themselves of it, no matter what the cost. Of late years it has been very scarce during the winter months, and the price was exorbitant. The market is at present abundantly supplied from the south of France, Spain, and Algeria, and the price is so moderate that the vegetables may be seen in the windows of the most inferior cook-shops. The annual cost of the salad consumed in Paris is estimated at 40,000*l.*

Treacle, or Molasses.

The etymology of molasses has been much disputed; but there is an expression in French which is identical in spelling with this word, namely, 'molasse' (softish), and which describes the liquidity of molasses, as distinguished from the granulous substance of which they are the residue. As our first sugar establishment was formed, in 1643, in an island (St. Christopher) one half of which was occupied by the French, it is possible that we may have adopted the word from them; and this conjecture is supported by a passage in 'Père Labat' (vol. iii. p. 93), wherein he uses the word 'molasse' in the sense of *soft*, to describe a species of sugar that had not received, or had lost, the proper degree of consistency.—From a St. Lucia correspondent to 'Notes and Queries,' No. 167.

Keeping Preserves.

To preserve jam from mould, Miss Becker advises persons when making preserves, as jam, jelly, &c., to exclude the air before the preserve has cooled, i.e. to tie them over while they are warm. The usual practice is to tie over the preserves when they are quite cold.

Shrewsbury Cakes.

Shrewsbury was formerly famous for its painted glass works, and for its making of excellent brawn. Nor ought to be forgotten the 'Shrewsbury Cakes,' which Shenstone has recorded among the products of his natal ground :

> And here each season do those cakes abide,
> Whose honoured names the inventive city own,
> Rendering through Britain's isle Salopia's praises known.

Another celebrated cake is manufactured at Shrewsbury; this is the *Simnel*, made also at Coventry, Devizes, and Bury in Lancashire. At Bury, on Mothering, or Mid-Lent Sunday, when young folks go to pay their dutiful respects to their parents, they go provided with this offering. At Shrewsbury it is made in the form of a pie, the crust being coloured with saffron, and very thick. At Devizes, it has no crust, is star-shaped, and is mixed with a mass of currants, spice, and candied lemon. The common Shropshire story about the meaning of the name Simnel is well known. A happy couple had a domestic dispute as to whether they should have for their day's dinner a boiled pudding or a baked pie. Words began to run high; but meanwhile the dinner lay not dressed, and the couple were getting hungry. So they came to a compromise by first boiling and then baking the dish that was prepared. To this grand effort of double cookery, the name of Simnel was given, because the husband's name was Simon and the wife's was Nell. The real history of this famous composition is very different. The name is of very great antiquity, and in Latin is called siminellus : and that from a Greek word signifying sifted or fine flour of wheat, mentioned among the finest kinds of bread by Galen, the physician, who was born in A.D. 131. Other languages have words very like it for fine flour : the German semmel, the Italian semolino. Originally, therefore, it was most likely not the heavy piece of pastry that it now is, but a lighter cake, considered as a treat by people who lived on coarser fare. The word *siminellus* is frequently met with in mediæval deeds. In the year 1044, when a King

of Scotland was visiting at the English court, an order was issued for twelve siminels for him and his suite every day. The monks of Battel Abbey in Sussex had by their rules bread of the most nutritious and digestible kind (*qui vulgo simenel vocatur*) commonly called simenel. This archæological confection is unsafe when eaten to excess: for an old gentleman of the year 1595, speaking no doubt from melancholy experience, gives this warning upon the subject, 'Sodden bread which bee called Simnels, bee verie unwholesome.'

Castles and Abbeys of England and Wales, 1870.

A Rare Omelet.

Dr. Hunter, in his 'Culina,' gives the receipt for an omelette, the invention of a lady, who had it regularly served at her table, three days in the week, and who died at the age of ninety-seven, with a piece of it in her mouth. The doctor adds that, in consequence of this accidental longevity, eggs rose ninety per cent. in the small town of Wells, in North America, where the old lady was born and died.

Pastry-Making.

Pastry-making was in the last century considered an accomplishment of such importance as to be taught in public schools. There was then resident in London one of the ancient families of the Kidders of Maresfield in Sussex, and a descendant of Richard Kidder, Bishop of Bath and Wells, who became a man of some notoriety. This was Edward Kidder, a pastrycook, or, as he called himself, 'pastry-master,' who carried on his business in Queen Street, Cheapside, and was induced to open two schools in the metropolis to teach the art of making pastry, one at his own place of business, and the other in Holborn. He also gave instruction to ladies at their private houses. So popular did his system of teaching become, that he is said to have instructed nearly 6,000 ladies in this art. He also published a book of 'Receipts of Pastry and Cookery,' for the use of his scholars, printed entirely in copper-plate, with a portrait

of himself, in the full wig and costume of the day, as a frontispiece. He died in 1739, at the age of seventy-three. By will he gave to his wife, Mary Kidder, a gold watch, a diamond ring, and all the other rings and trinkets used by her, and also all the furniture of the bedroom in which he lay in the house in Queen Street; and to his daughters, Elizabeth and Susan, he bequeathed all his money, Bank stock, plate, jewellery, &c. His daughter Elizabeth's will was proved in 1758, and her sister Susan's in 1768. Susan, among other bequests, gave to her cousin, George Kidder, of Canterbury, pastrycook, 50*l.*, and her copper-plates for the receipt-book.

Something for Everybody.

Marmalade

was originally made of quinces; and the term really means 'quince jam,' from the Spanish *marmala*, or quince. The true old marmalade can be traced back so far as the time of Henry VIII.; and in my childhood (says a correspondent of 'Notes and Queries'), which reaches farther back than the present century, no other was known but that made of quinces. It is only of late years that an imitation has come into use, made with oranges, and too often adulterated with boiled and roasted apples.

Baron Liebig's Food for Children and Invalids.

'For mothers,' says Liebig, 'who are denied the happiness of suckling their own children, or who have not sufficient nourishment for them, the choice of a fitting food is a matter of importance. Customs and opinions formed at haphazard decide generally the question; and as the simple laws of nutrition, which ought to determine it, are mostly unknown to the parties concerned, the bodily development of the child, in its earliest youth, often suffers considerably by the sort of food employed. It must be intelligible to any one, that a child deprived of its mother's milk, and having no wet-nurse (the choice of one being difficult and often attended with danger), can only be fed properly when the food given is equivalent in

nourishing power to that of woman's milk. When the soup is properly prepared it is as sweet as milk, and any further sweetening is unnecessary. It contains the *double concentration of woman's milk.* After boiling, the soup will keep twenty-four hours without undergoing any change. The immediate inducement to my making such soup was the circumstance that one of my grandchildren could not be suckled by its mother, and that another required, besides its mother's milk, a more concentrated food. In both cases, as well as in other families where it had been introduced, the soup proved an excellent food; the children thrived perfectly well, and many a petty suffering disappeared after some weeks' use of the soup. I often take it (prepared with ten parts of milk and two parts of malt flour) with tea for my breakfast. It has a slight flavour of malt, to which children soon get accustomed; after some time they like it better than any other food.'

Opposition to Tea-Drinking.

The properties of Tea seem to be those of an astringent and narcotic, but, like some other narcotics, in small quantity; its first office is that of a very gentle stimulant; and certain kinds of it, when taken pretty strong, and near the usual time of going to rest, have the effect of keeping off sleep; but when taken moderately, and tempered with cream and sugar, it acts merely as a grateful diluent, and conveys a slight exhilaration.

At its first introduction, and for more than fifty years afterwards, tea was violently assailed, and many frightful disorders were attributed to its use: it was said to produce indigestion, lassitude, melancholy, and a long train of nervous complaints. Such apprehensions, or at least inquiries indicating such, are sometimes to be met with still; but the long and univeral experience of this country has decided that from the use of tea, as generally practised, there result no bad consequences whatever. It should not be taken too soon after dinner, as it may interfere with digestion from its distending the stomach, and from its astringent and narcotic properties; but when taken three or

four hours after the principal meal, it assists the latter stages of digestion, and promotes the insensible perspiration. There are peculiarities of constitution in some, which render tea very hurtful to them, but the same is true of many substances, used both in diet and medicine.

Those who are fixed down to a sedentary employment, who must work at night, and who take tea to keep themselves awake; who, from the want of exercise are unable properly to digest animal food, will no doubt exhibit many symptoms of indigestion, and that feeble tremulousness, known by the epithet *nervous*; but the tea ought not to bear the blame of all those disorders which are more justly to be ascribed to the confinement and inactivity of the individual. In enumerating the advantages of tea, Dr. Paris says, it must not be forgotten that it has introduced and cherished a spirit of sobriety; and it must have been remarked by every physician of general practice, that those persons who dislike tea, frequently supply its place by spirits and water. We may add, that for one patient whose general frame, or whose digestion is weakened by the use of tea, ten thousand are irretrievably injured by the use of alcohol, however diluted and disguised.

Dr. Johnson, in the year 1756, made a hearty defence of the most opposed beverage, by warning Mr. Hanway—the writer of an 'Essay on Tea,' who considered it 'as pernicious to health, obstructing industry, and impoverishing the nation'—that he is to expect little justice from a hardened and shameless tea-drinker, who has for twenty years diluted his meals with only the infusions of this fascinating plant; whose kettle has scarcely time to cool; who, with tea amuses the evening, with tea solaces the midnight, and with tea welcomes the morning.

'That the diseases commonly called nervous, tremors, &c., habitual depression, and all the maladies which proceed from laxity and debility, are more frequent than in any former time, is, I believe, true, however deplorable. But this new race of evils will not be expelled by the prohibition of tea. This general languor is the effect of general luxury, of general idleness. If it be most to be found among tea-drinkers, the reason is, that tea is one of the stated amusements of the idle

and luxurious. The whole mode of life is changed: every kind of voluntary labour, every exercise that strengthened the nerves, and hardened the muscles, is fallen into disuse. The inhabitants are crowded together in populous cities, so that no occasion of life requires much motion; every one is near to all that he wants; and the rich and delicate seldom pass from one street to another, but in carriages of pleasure. Yet, we eat and drink, or strive to eat and drink, like the hunters and huntresses, the farmers and the housewives of the former generation; and they that pass ten hours in bed, and eight at cards, and the greater part of the other six at the table, are taught to impute to tea all the evils which a life unnatural in all its parts may chance to bring upon them.'

Since these remarks were written, the use of tea has extended far beyond the idle and luxurious; but it has neither unfitted the husbandman for labour, nor the hero for war. It has been the beverage for the soldier in his camp, of the seaman on his voyage; yet neither Grecian activity, nor Roman steadiness, have surpassed the warlike virtues of British valour, in every climate of the globe.

Abridged from Dr. Macaulay's Dictionary of Medicine.

The poor have, as it were, been driven back upon tea, not only as a luxury to be employed occasionally or even at meal times, but as the habitual drink, the one modification of water which is not disgusting, and yet quenches the thirst of people who necessarily feel thirst as the idle or sedentary do not. It is natural and inevitable that they should swallow it by pints a day, and they do it; and if, as Dr. Aldridge says, it injures their nerves and so lowers their vitality that the next generation suffers, it is a bad prospect for the country. 'While on the head of stomach disorders—I refer to their presence in connection with uterine derangements—I will take this opportunity of remarking upon the lamentable amount of sickness consequent upon the abuse of tea by women of the working classes. Instead of using tea as an occasional beverage, they make it a principal article of diet and drink it, usually without milk or sugar, several times a day. At most meals bread and butter is the only solid

accompaniment. In many cases, doubtless, poverty imposes on them a meagre diet; but even in such the one alluded to might be advantageously replaced by other kinds of food not more expensive. . . . Bitter and strong is the agitation at the present period against beer and other intoxicating liquors as the root of all evils, but in my opinion there is room for agitation against tea-drinking as carried on in the way spoken of, for I am convinced that a deterioration of health among the working classes and a lowered vitality in the rising generation are consequences of the abuse of the beverage in question.' We do not believe a word of it. The objection to tea is just like the objection to tobacco, the result of noticing its action upon certain constitutions. It is nothing new to assert that tea acts injuriously upon a few constitutions, principally those of persons with hysteric tendencies, upon people of very sedentary habits who are apt to suffer from everything, and especially from under-baked bread, and upon women worn out with city excitements; but that is no proof that it is injurious to the mass of the people, who take very little in actual quantity, being made moderate by its cost, whose nerves are strengthened by labour, and who are constantly in the open air. They drink all their lives with total impunity, much greater impunity than they would enjoy if they drank only water. How much, as a contemporary has already asked, do the Chinese, who are drinking tea all day, and drinking it stronger than our poor people can, suffer or lose strength? or the Russians, who are not a whit more sober than the English, or a whit better fed? Or in what degree are upper-class women who drink perhaps two little cups a day stronger than washerwomen who drink two pints? The precise effect of tea on the system is still undecided, but the best physiologists agree that in some way it lessens waste, and as Dr. Lethby puts it, helps 'to repair and renovate the exhausted brain.' If a few nervous women suffer, as, for instance, factory hands may suffer, we question if they suffer as much as they would from the want of their most innocent luxury, the one really good thing except the lucifer-match with which civilisation has hitherto sweetened the lives of the English poor. If the teetotallers could teach them to drink

tea cold they would confer a great benefit on them, for cold tea can be carried about and hot tea cannot; and possibly, should sugar ever fall to its proper price, they may teach them, sweetened cold tea being a really palatable draught; but to banish tea, or limit the quantity drunk, or even to create a suspicion of it, would be a real injury to English mankind. It would literally leave them nothing to drink except most indifferent water, which they will not drink, and the alcholic draughts from which our society already suffers so severely.

Slow Poison: Spectator Newspaper.

'The most powerful accessory element in Tea,' says Dr. Han Kester, 'is tannic acid;' which he thus describes: 'The action of tannic acid on the tissues is seen in the effect produced on the numerous membranes of the mouth; when it is introduced there is no sour flavour, but the mouth is, as it were "drawn up." This is what is called an astringent effect. Such an action in a slight degree is not unpleasant. The effect is more obvious when the tea has neither sugar nor milk.' The nutriment held in solution by this kind of fluid is not easy of digestion.

Bohea is an inferior quality of tea, brought, like all the rest, from China. When drunk in moderate quantities, it invigorates the system, and imparts a temporary exhilaration; but if taken too copiously and too frequently, and if idle and luxurious habits are indulged in, it will aggravate hypochondriacal and hysterical complaints, and be accompanied with many of those diseases of the stomach and bowels known by the name of dyspepsia, indigestion or stomach complaints, and which the common people class under the name of *nervous*.

Properties of Coffee.

Coffee is the seed of a plant cultivated in Arabia, Persia, the Isle of Bourbon, the West Indies, and in some parts of America. It possesses astringent qualities, and is of service when the digestion is weak. When drunk warm within an hour after dinner, it is of great benefit to those who have headache from weakness of the stomach, brought on by sedentary habits

and close application or occasional excess; and it enables such patients to digest certain articles of food, such as fat and oily matters, which they would probably be unable to do without such assistance. When drunk too soon after port wine, coffee often produces a disagreeable acidity in the stomach. Like tea, it has the effect of keeping a person awake; but any inconvenience of this kind may be prevented by taking it several hours before bed-time. It is thought to counteract the effects of narcotic substances; and hence is much used in Turkey, to prevent the injurious consequences of the opium which its inhabitants use. A strong infusion of the best Mocha coffee, newly roasted, and made very strong, has been found of service in spasmodic asthma; it should be drunk very warm, and without milk or sugar, and repeated at the interval of half-an-hour or less. Its effects in rendering the bowels slow are probably very little to be regarded; indeed, it has been known in many instances to prove a quick and easy laxative. Where coffee is directed as a promoter of digestion, it should be carefully made by infusion, as boiling dissipates its fine aromatic taste.

Dr. Macaulay's Dictionary of Medicine.

The general effect of coffee upon the nervous coat of the stomach is, unquestionably, a gentle stimulant; and, like most substances of that class, has, to a certain extent, a tonic power, it is not hesitated to be recommended to invalids whose powers of digestion have been debilitated by stimulants of a more powerful character, such as fermented liquors, wine, spirits, &c. The custom of taking coffee after a late dinner, and just before retirement to rest, is bad; because its stimulant property upon the nerves of the stomach exerts a power destructive to sleep—it promotes an activity to the mind, and gives a range to the imagination which prevents self-forgetfulness, that sure harbinger of repose.

The great use of coffee in France is supposed to have abated the prevalence of gravel. In the French colonies, where coffee is more used than in the English, as well as in Turkey, where it is the principal beverage, not only gravel, but gout, is scarcely known. Among others, a case is mentioned in the

'Pharmaceutical Journal' of a gentleman who was attacked with gout at twenty-seven years of age, and had it severely till he was upwards of fifty, with chalk-stones in the joints of his hands and feet; but the use of coffee completely removed the complaint.

Qualities of Claret.

This wine, brought from Bordeaux, is of a delicate flavour, and distinguished by a perceptible combination of the acid with the resinous flavour. It is less heating and more aperient than the other wines, and agrees well with the stomach when taken in moderation; if taken in excess, claret produces acidity and indigestion, often rather from the quality than the quantity. But the clarets of wine merchants are often very substantial wines, compounded in various ways for the English market. They are thus often mixed with hermitage, and with raspberry brandy; and if procured in rough, doubtful channels, as we find them at taverns, they are too frequently acescent, and apparently composed of some clarets, mixed with faded port, or some other spoiled wines. The clarets, however, derived from respectable sources, are agreeable, and apparently innoxious wines; they are moderately exhilarant, and have a tendency to relax the bowels, and increase the flow of urine. They are the wines fitted for those persons who are easily excited, and in whom the stronger wines readily produce febrile action; and in that state of the system which is connected with a tendency in the urine to deposit white sand, claret may be regarded as an effective remedy.

Brande's Manual of Pharmacy.

Cider.

This refreshing and delightful drink is made from the fermented juice of apples. It has little spirit, and hence is apt to become sour in the stomach of dyspeptic patients, by whom, therefore, it should be avoided. When in a good state, it is a very wholesome drink, though accused of producing rheumatism. Cider-drinkers are generally thin, but firm and muscular; certainly subject to rheumatism, and occasionally to gout; but

on the whole, healthy and long-lived. The sweet ciders of Herefordshire are less wholesome than the strong, more pungent cider of Devonshire. Cider, when made early, of unripe fruit, is sharp and acid, apparently able, without any suspicion of lead, to occasion the colica pictonum (Devonshire colic, or dry belly-ache). The poison of this metal, however, often impregnates from accident or design this otherwise wholesome beverage; and the most fatal colics and palsies are the consequence.

Dr. Parr of Exeter.

Pear Beer.

At Godstone, in the garden of a little alehouse, grew a pear-tree, the fruit of which was so hard and worthless, that it acquired the name of the *iron* pear-tree. Borwick, the landlord, who was much troubled with the gout, brewed his own beer; and to avoid the trouble of fetching water from a distance, he sank a well near the pear-tree. After drinking the beer brewed with this water, he found himself cured of his complaint, but to persons not similarly afflicted the beverage was distasteful. Subsequently, a man named Prentice, who lived with the woman to whom the house then belonged, sent the water to London, and sold large quantities of it at the rate of sixpence a quart. After a time, however, the sides of the well fell in, and the pear-water was no more thought of until its revival.

From Manning and Bray's Surrey.

Proverbs and Sayings regarding Health and Disease, by Dr. Hunter and Others.

Ague in the spring is physic for a king.
Agues come on horseback, but go away on foot.
A bit in the morning is better than nothing all day.
You eat and eat, but you do not drink to fill you.
An apple, an egg, and a nut, you may eat after a slut.
Old young, and old long.
They who would be young when they are old, must be old when they are young.

When the fern is high as a spoon,
You may sleep an hour at noon.

When the fern is as high as a ladle,
You may sleep as long as you are able.

When fern begins to look red,
Then milk is good with brown bread.

At forty a man is either a fool or a physician.
After dinner sit a while, after supper walk a mile.
After dinner sleep a while, after supper go to bed.
A good surgeon must have an eagle's eye, a lion's heart, and a lady's hand.
Good kale is half a meal.
If you live for ever, you must wash milk from your liver.
Butter is gold in the morning, silver at noon, and lead at night.
He that would live for aye, must eat sage in May.
After cheese comes nothing.
An egg, and to bed.
You must drink as much after an egg as after an ox.
He that goes to bed thirsty rises healthy.
One hour's sleep before midnight is worth two hours after.
Who goes to bed supperless, all night tumbles and tosses.
Often a little eating makes a man fat.
Fish must swim twice.
Drink wine and have the gout, drink no wine and have it too.
Young men's knocks old men feel.

Early to bed, and early to rise,
Makes a man healthy, wealthy, and wise.

Wash your hands often, your feet seldom, and your head never.
Eat at pleasure, drink by measure.

Cheese is a peevish elf,
It digests all but itself.

The best physicians are Dr. Diet and Dr. Quiet, and Dr. Merryman.

Drink in the morning staring,
Then all the day be sparing.

Eat a bit before you drink.
Feed sparingly, and dupe the physician.
Better be meals many than one too many.
You should never touch your eye but with your elbow.
The head and feet keep warm, the rest will take no harm.
Cover your head by day as much as you will, by night as much as you can.
Fish spoils water, but flesh mends it.
Apples, pears, and nuts spoil the voice.
Quartan agues kill old men, and cure young.
Old fish, old oil, and an old friend.
Raw pullet, veal, and fish make the churchyard fat.
Of wine the middle, of oil the top, of honey the bottom.
The air of a window is the stroke of a cross-bow.
When the wind is in the east, its neither good for man nor beast.
A hot May makes a fat churchyard.
That city is in a bad case, whose physicians have the gout.
When the sun rises, the disease will abate.—[A Hebrew proverb originating from a tradition that Abraham wore a precious stone round his neck, which preserved him from disease, and which cured sickness when looked upon. When Abraham died, God placed this stone in the sun.]
If you take away the salt, throw the meat to the dogs.
Lever à cinq, dîner à neuf,
Souper à cinq, coucher à neuf,
Font vivre dans nonante-neuf.
Hunger's the best sauce.
Qui a bu boira. Ever drunk, ever dry.
The child is too clever to live long.
Bitter to the mouth, sweet to the heart.

Dates as Food.

What rice is to the most fertile parts of Asia, that are dates to Africa. The palm-tree is found in every country from the Tigris to the Atlantic; and it supplies millions of human beings with their daily food in Arabia, and in nearly the whole of Africa north of the equator.

Dates are not only the principal food of the Fezzan oases, but the main substance of their inhabitants. All live on dates, men, women, and children; horses, asses, and camels, and sheep, and fowls, and dogs. And in Egypt, besides being the chief sustenance of the people, dates are so plentiful, that from a very early period they have been commonly given to camels, the only beasts of burden generally used in that country.

In the valley of the Nile, a feddan ($1\frac{3}{4}$ acre) is sometimes planted with 400 trees; and at Moozzuk an entire date-palm is only worth about a shilling.

In the Thebaid, however, is used a food which multiplies itself even more rapidly than either dates or rice. This is the dhourra, which until recently was confined to Upper Egypt, and of which the reproductive process is so remarkable, that it yields to the labourer a return of 240 for 1. It resembles millet, and is sold at the rate of 3*d.* per bushel. Hamilton counted 3,000 grains in one ear of dhourra, and each stalk has in general four or five ears.

In Lower Egypt, the dhourra was formerly unknown; but, in addition to dates, the people made a sort of bread from the lotos, which sprang spontaneously out of the rich soil of the Nile. This must have been a very cheap and accessible food; while, to it there was joined a profusion of other plants and herbs, on which the Egyptians chiefly lived. Indeed, so inexhaustible was the supply, that at the time of the Mohammedan invasion there were, in the single city of Alexandria, no less than 4,000 persons occupied in selling vegetables to the people.

MEDICINAL PLANTS.

Medicinal Plants.

Plants whose leaves resemble the form of some or other of the vitals, or have marks or figures upon them representing any cuticular affection, were thought to point out their own medicinal qualities. Thus, wood-sorrel was used as a cordial, because its leaf is shaped like a heart. Liverwort was given for disorders of the liver. The herb-dragon was employed to counteract the effects of poison, because its stem is speckled like some serpents. The yellow juice of the celandine recommended it for the cure of the jaundice. And Paracelsus said, that the spots which appear on the leaves of the Persicaria maculosa proved its efficacy in the scurvy.

Dr. Nach's Note to Hudibras.

One of the most copious chapters in Aubrey's 'Natural History of Wiltshire' is that 'On Plants,' to which Ray has appended a number of valuable notes. 'God Almighty,' says Aubrey, 'hath furnished us with plants to cure us, that grow, perhaps, within five or ten miles of our abodes, and we know it not. Homer writes sublimely, and calls plants, hands of the gods; and we ought to reach them religiously, with praise and thanksgiving. I am no botanist myself, and I think we have very few in our countrey that are; the more is the pity.'

Aubrey then describes one Thomas Willisell, a foot soldier, who happened to go away with some *simplers*, and in a short time became a good botanist. 'He was a lusty fellow, and had an admirable sight, which is of great use for a simpler, was as hardy as a Highlander; all the clothes on his back not worth ten groats, an excellent marksman,' &c. 'The botanists of

London did much encourage him, and employed (sent) him all over England, Scotland, and a great part of Ireland; where he made brave discoveries, for which his name will ever be remembered in herballs. He made a fine collection of plants and shells; he could write a hand indifferent legible, and had made himself master of all the Latine names; he pourtrayed but untowardly. All the profession he had was to make pegges for shoes.'

Aubrey names several apothecaries, in Wiltshire, 'whose profession leadeth them to an acquaintance of herbes.'

Ramsoms taste like garlick; they grow much in Cranbourn Chase. A proverb:

> Eate leekes in Lide (March), and Ramsins in May,
> And all the year after physitians may play.

John Britton prints this proverb:

> Eat Leekes in *Lent*, and Raisins in May, &c.

Illustrious Simplers.[1]

The vegetable drug Mithridate long handed down the name of the king of Pontus, its discoverer; 'better known,' says Gerard, 'by his sòveraigne Mithridate, than by his sometime speaking two-and-twenty languages. . . . What should I say,' continues the old herbalist, 'of those royal personages, Juba, Attalus, Climenus, Achilles, Cyrus, Massynissa, Semyramis, Dioclesian,'—all skilled in 'the excellent art of simpling?'

Betony.

This plant was formerly used in medicine, and was much celebrated for its numerous virtues; but it is now totally neglected. Antonius Musa, physician to the Emperor Augustus, filled a whole volume with enumerating its virtues, stating it to be a remedy for no less than forty-seven disorders; hence in Italy the proverbial compliment, 'You have more virtues than betony.'

[1] Collectors of Simples, or physical herbs.

Properties of Rosemary.

Rosemary has a warm, pungent, aromatic, bitter taste, and a smell approaching to that of lavender, joined with the colour of camphor; crystals of which last are deposited when the plant is long kept. What virtues it has are of a stimulant nature; and it is sometimes used in nervous headache, and hysteria. The leaves and tops yield an essential oil, the dose of which is from three to five drops. From this oil and rectified spirit, a spirit of rosemary is prepared.

An amusing anecdote is told of essence of rosemary. At a private party in London, a lady who, though in the autumn of life, had not lost all dreams of its spring, said to Douglas Jerrold, 'I cannot imagine what makes my hair turn grey; I sometimes fancy it must be the essence of rosemary with which my maid is in the habit of brushing it. What do you think?' 'I should be rather afraid, madam,' replied the distinguished dramatist drily, 'that it must be the essence of *time*.' —*Rowland on the Human Hair*, p. 72.

The custom of using Rosemary at funerals is thus explained by 'Wheatly on Common Prayer.' 'To express their hopes that their friend is not lost for ever, each person in the company usually bears in his hand a sprig of *rosemary;* a custom which seems to have taken its rise from a practice among the heathens of a quite different import. For they, having no thoughts of a future resurrection, but believing that the bodies of those that were dead would for ever lie in the grave, made use of a *cypress* at their funerals; which is a tree that being once cut, never revives but dies away. But Christians, on the other side, having better hopes, and knowing that this very body of their friend, which they are now going solemnly to commit to the grave, shall one day rise again and be reunited to his soul; instead of *cypress*, distribute rosemary to the company, which, (being always green, and flourishing the more for being cropt, and of which a sprig only being set in the ground will sprout up immediately and branch into a tree), is more proper to express this confidence and trust.'

It would appear that the early colonists of America had taken with them this old custom. Dr. Coxe, the Bishop of New York, alludes to the practice in his beautiful poem, *The Church's Daughter:*

> Then roses pale, and *rose-marina*,
> She scatters o'er the marble dust;
> And at the last heart-rending scene
> As earth takes back the precious trust.'

Uses of Rue.

Rue was anciently called the *Herb of Grace*, from its having been used in exorcisms against evil spirits. This was the common name for Rue in Shakspeare's time: Perdita, in the 'Winter's Tale,' says:

> Reverend sirs,
> For you there's rosemary and rue; these keep
> Seeming and savour all the winter long:
> Grace and remembrance to you both.

The saving, salubrious, and antiseptic qualities of Rue are recorded in olden botany, and the medicine practised by the religious orders. Ancient monkish lines attribute many virtues to Rue. It possesses powerful stimulant, antispasmodic, and tonic properties; but its improper employment, internally, has produced serious results. It has a strong, unpleasant smell, and bitterish taste; the leaves are very acrid, and blister the skin when much handled.

The placing of Rue upon the bench of the dock in the Central Criminal Court in the Old Bailey, is attributed to the properties of that plant in preventing fever, infection and fainting; and its use for this purpose dates from the time of the gaol distemper, in the above Court, May, 1750.

Manifold Properties of the Elder Tree.

The Elder tree does as much good by its noxious as by its agreeable qualities. If corn or other vegetables be smartly whipped with the branches, they will communicate a sufficient

portion of this scent to keep off the insects by which so many plants are frequently blighted. An infusion of the leaves, poured over plants, will preserve them from caterpillars also. The wine made from the berries is well known; but, perhaps, it may not be so generally known that the buds make an excellent pickle. A water distilled from the flowers rivals buttermilk itself as a rural cosmetic. In some remote country places it supplies the place both of the surgeon and the druggist; it furnishes ointments, infusions, and decoctions, for all ailments, cuts, or bruises. Every part of it serves some useful purpose; the wood, pith, bark, leaves, buds, flowers, and fruit. Its narcotic scent makes it unwholesome to sleep under its shade.

Aubrey has a curious note on Elder: 'Dwarfe-elder (*ebulus*), at Box, &c. (Wilts), common enough. The juice of *ebulus* turnes haire black; and being mingled with bull's fat, is Dr. Buller's remedie for the goute.'

'The best way to dye haire browne is to take alhanna in powder, mixt with fair water as thick as mustard: lay it on the haire, and so tye it up in a napkin for twelve houres time. This will keep the haire browne for one whole yeares time after it. The alhanna does prepare the hair and makes it of a darke red or tawny colour. Then they take *takout*, which is like a small gall, and boyle it in oyle till it hath drunk up all the oyle; then pulverise it, and mix it with water and put it on the haire. Grind a very little of alkohol, which they use in glazeing of their earthen vessels, in a mortar with the takout, and this turnes the haire to a perfect black. This receipt I had from my worthy and obligeing friend Mr. Wyld Clarke, merchant of London, who was factour many yeares at Scta. Cruce, in Barberie, and brought over a quantity of these leaves for his own use and his friends. 'Tis pity it is not more known. 'Tis leaves of a tree like a barbery leafe. Mr. Clarke hath yet by him (1690) above half a peck of the alhanna.

'Dr. Edw. Brown, M.D., in his Travells, sc. description of Larissa and Thessalie, speaks of alhanna. Mr. Wyld Clarke assures me that juice of lemons mixt with alhanna strikes a deeper and more durable colour either in the hands or nailes.'

The *alhanna* is a species or variety of the genus Lawsonia known by the Arabic name of *hinna* or *henna*, and in their medical works, as in that of the 'Serapion,' is described under that of *alhanna*, where, it is interesting to observe, he quotes the description by Dioscorides of *kupros* as applicable to this plant. This *kupros*, or Cyprus, is moreover supposed to be the *copher* of Scripture. No plant is more highly esteemed or more frequently employed than the *hinna*, and it would appear to have been applied to the very same purposes from remote antiquity. All Oriental travellers describe the use of this plant by Asiatic women in dyeing their nails and the tips of their fingers, as well as the soles of their feet, of an orange hue, with the leaves of the hinna. It is also used by the men for dyeing their beards, the orange colour being afterwards converted to a deep black by the application of indigo. That this plant was similarly used from very early times is highly probable from the allusions to it by poets, as well as from some of the Egyptian mummies appearing as if the nails had been similarly dyed.

Aubrey tells us that in Wiltshire Elders grow everywhere; 'the apothecaries well know the use of the berries, and so doe the vintners, who buy vast quantities of them in London, and some doe make no inconsiderable profit by the sale of them.' [Douglas Jerrold ordered a bottle of old port. 'Not *elder* port,' he said—such as was the port in Aubrey's time.]

The Laurel-Tree.

Know that once on a time, as Daphne, the lovely daughter of Peneus, was amusing herself with a bow and arrows, in a forest of Thessaly, she was surprised by a rude musician, named Phœbus. Timid and bashful as most young ladies are, she turned and fled as fast as her legs could carry her. After running, closely pursued by the eager Delphian, for several miles, and becoming very much fatigued, she felt inclined to yield; but wishing to yield in a reputable manner, she lifted up her hands and asked the gods to help her. Her call was heard in a jiffy, and quicker than you could say 'Presto, change!'

she was a laurel tree, which Phœbus married on the spot. This was the Eve of the laurel family, so that all these trees you meet in the world at present must be rational beings, since they are the descendants of the beautiful Greek maiden Daphne. And to satisfy you that this is no foolish legend, but, on the contrary, a well-authenticated fact, clinched and riveted in the boiler-head of historical truth, permit me to assure you—for I have seen it myself—that in the Villa Borghese, near Rome, in Italy, is an exact representation of the wonderful incident, cut in Carrara marble—the bark of the laurel growing over the vanishing girl, and her hands and fingers sprouting into branches and leaves—supposed to have been copied from a photograph taken on the spot—for there is a photograph in existence exactly like the marble statue.

Atlantic Monthly.

Dumb Cane.

This plant is a native of South America and the West Indies. It grows to the height of five or six feet, and has oblong cuspidate leaves. It secretes an acrid poison, so that when any part of the plant is chewed, the tongue swells, and the power of speech is lost. It is, on this account, called Dumb-Cane. Sir William Hooker, in his 'Exotic Flora,' relates the case of a gardener who incautiously bit a piece of Dumb-Cane, 'his tongue swelled to such a degree that he could not move it; he became utterly incapable of speaking, and was confined to his house for some days in the most excruciating torments.' The juice is stated to impart an indelible stain to linen. Notwithstanding its poisonous nature, P. Browne says that in common with the *Arum ovatum*, its stalk is used to bring sugar to a good grain when it is too viscid, and cannot be made to granulate with lime alone. In the districts where it grows, the natives use a decoction of the stem as a bath and fomentation in dropsy; and the rootstick is used in obstinate constipation, and in long-standing gout. The negroes also use it as an anti-aphrodisiac. Another poisonous plant of this genus, though not so violent as the Dumb-Cane, was formerly used for wetting

the mouths of negroes as a punishment for slight misdemeanors.

The Vanilla Plant.

The history of the migration of the Vanilla plant from America to the East Indies is too interesting not to be made known, because it brings to mind in every respect the episode of the transportation of the plant of the coffee-tree taken from the hot-houses of Amsterdam, given to Louis XIV., and father of the three plants, one of which was taken to the French Antilles by Captain Declieux, who, in a scarcity of water experienced by the ship's crew, shared the small quantity which he had to drink between himself and his dear coffee-plant. Indeed, only one of the Vanilla roots stood the passage from Belgium to the East Indies; but it was only by the greatest care in preserving it from the rough treatment of the sailors, from the changes of temperature, and from the salt water which was thrown upon it. It would undoubtedly have perished if M. Marchal had not made it his darling child. The plant so happily saved was given to the Botanic Garden of Buitenzorg at Java, and prospered there so well that it flowered; and it is without doubt that which was afterwards described by Dr. Blume, who on account of its green flower named it *Vanilla viridiflora*; so that this name should also be regarded as a synonym of the specification, already so perplexed, of this species.

Humboldt tells us that the Mexicans were already in the habit of perfuming their chocolate when the Spaniards discovered this part of America. The early travellers in this region, however, found the American chocolate to be a detestable beverage, to which the Europeans afterwards gave an exquisite flavour. Chocolate was brought from Mexico into Europe in 1520; but it appears that Vanilla was brought to the Continent as a perfume, about the year 1510, at the same time as indigo, cochineal, and cacao itself—that is to say, ten years before the arrival of tobacco.

It appears from the researches of Professor Miquel that the 'manna' which fell in the province of Van, in Asia Minor, in

1845, consisted of fragments of *Lichen esculentus*. These must have been torn from their woods by a storm, and carried through the air to the places where they fell.

Lettuce.

This well-known plant contains a narcotic principle, and those who use it with a view to procure sleep, should not use vinegar with it, as vinegar counteracts its soporific power. Lettuce affords an extract which has some of the properties of opium, and which is called *Lactuarium* or Lettuce opium; it is thought to have the anodyne without the constipating effects of opium.

Injurious Qualities of Cucumbers.

The Cucumber found in the market is generally obtained from plants forced in a warm, damp atmosphere. When the heat of the day is greatest the plants are watered, and then the windows of the frame lid closed, and the action of solar light prevented by covering the frames with a blind. A kind of steam is thus generated in the interior of the bed, and the fruit forced to grow with great rapidity. This is generally the variety known as the black spined long prickly, a contrast to the sandy cucumber grown in the open fields of Bedfordshire. Our object here is to remind lovers of this vegetable that, in addition to the saccharine and nutritious elements entering into the composition of the cucumber, we have also acrid and purgative principles, found not unfrequently in a state of concentration, hence accounting for the great suffering and alarming train of symptoms induced after a surfeit of this fruit. We have known many cases, at one time dangerous, which we had no hesitation in pronouncing to be dependent upon cucumber poisoning, and entirely owing to carelessness and incaution in dressing and eating this vegetable. We consider before using the cucumber it should in every instance be sliced and purged of the preponderance of its acrid and purgative elements by treating with a little salt and then saturated with vinegar for some hours

previously—never eaten without in fact—otherwise it is very apt to produce choleraic diarrhœa.

Medical Circular.

It is related that Dr. Glynn of Cambridge, being in attendance on a lady patient, pointed out to her the impropriety of eating cucumber, of which she was immoderately fond, when he gave her the following humorous receipt for dressing cucumber: 'Peel it with great care, then cut it into very thin slices; pepper and salt it well; and *then throw it away.*'

Asparagus as a Medical Agent.

The advantages of this plant are not sufficiently estimated by those who suffer from rheumatism and gout. Slight cases of rheumatism are cured in a few days by feeding on this delicious esculent; and more chronic cases are much relieved, especially if the patient carefully avoids all acids, whether in food or beverage. The Jerusalem artichoke has also a similar effect in relieving rheumatism. The heads may be eaten in the usual way, but tea made from the leaves of the stalks, and drunk three or four times a day, is a certain remedy, though not equally agreeable.

Gardener's Magazine.

Valerian Root.

The name of this plant originated with the physicians of the dark ages: it is evidently derived from *valere*, to be powerful, in allusion to the many virtues of the plant.

The great wild valerian called *officinalis*, was called *Phu* in the herbals, being taken for the φοῦ of Dioscorides. Liddel and Scott give τὸ φοῦ as being probably the Pontic name of the plant valerian. Salmon, in his folio Herbal, says it is called in Greek φοῦ, καὶ Νάρδος ἀγρία, and in Arabic it is called *Fu*. The English name is Setwall; the German is *Baldrian*, from the old word *bald*, quick, full of life. It is a nervine and antispasmodic, and Hempel says it has been much abused by the old-school physicians. Professor Joerg, however, and his disciples have shed some light on its physiological action; they

find it to possess considerable medicinal powers, but by no means the power attributed to it by imaginative empiricism. They tried the powdered root infused in tepid water. It affects chiefly the head and urinary organs, but has a wide range of action. A patient at the Hôtel Dieu at Amiens, taking six drachms daily for some time, woke up delirious, fancying one side of the room to be in flames. Dr. Sibthorp and Mr. Hawkins gathered a variety in Lycia, *Valeriana Dioscoridis*, which they took to be the real φοῦ of Dioscorides. The *Valeria calcitrapa* is a native of Africa and the Levant, but had become a weed on many walls about Chelsea, having escaped from the *physic garden* there. Trimen in his 'Flora of Middlesex,' makes Mr. Cayley report it as completely naturalised in 1801, and Dickson found it on the walls of Chelsea Hospital. It is still found at Eltham, in Kent. Mr. Trimen thinks Dr. Uvedale introduced it there before 1722, for he lived in the old palace at Eltham. There even now exists an old-fashioned place, called 'Uvedale House,' in Church Street, Chelsea, not yet destroyed. If Dr. Uvedale ever lived there, his residence in Chelsea would connect Valerian with both Chelsea and Eltham. From Withering we learn that cows eat the leaves, whilst sheep are not fond of them. Cats so delight in the roots, that they will even scratch up the soil to get at them, and when found (one of the effects of valerian being to cause 'irresistible laughter') the demurest and most discreet of elderly pussey-cats frisketh again as in her kitten days. It is also the one point in the universe in which rats and cats are agreed; the rats so love the root that rat-catchers use it to draw them together. It is also suggested that the name Valerian is derived from the Latin verb *Valeo-Valere*=to be strong or efficacious, i.e. in allusion to its strong odour, so attractive to the lower animals, especially cats; or because the ancients believed that the *Valeriana officinalis* was a very powerful medicinal agent. Indeed, the latter is really a strong and efficacious antispasmodic. The above derivation certainly appears more likely to be the true one, than another which has been suggested, viz., that the 150 species of the Valerianæ were named after some botanist of the name of Valerius.

Abridged from the Athenæum.

Lost Appetite.

In 1835, Dr. Coulter stated to the British Association, that in India is found a plant a species of *Veratrumi* (hellebore), not the Veratrum of the shops, a portion of which was taken medicinally by a person labouring under dyspepsia, so that he could make use of no food, and having, at the time, to ride thirty miles a day. After the second dose, his appetite returned. The plant is called by the natives, the Indian's root.

Grains of Paradise.

Guinea grains, or Malaguela, a pepper, are the seeds of a species of Cardamum. They are imported from the coast of Guinea, where they are used for seasoning food, and are held in great esteem. In Africa they are considered to be extremely wholesome.

Grains of Paradise were used very anciently as a spice in English cookery. The ancient fee-favour of the city of Norwich is twenty-four herring-pies, each containing five herrings, to be carried to court by the lord of the manor of Carleton. In 1629, these pies were seasoned with half-a-pound of ginger, half-a-pound of pepper, a quarter-of-a-pound of cinnamon, one ounce of cloves, one ounce of long pepper, half-an-ounce of grains of paradise, and half-an-ounce of galangales. About forty thousand pounds of this seed are yearly imported into England. With the exception of what is used in veterinary medicine, all this is said to be employed to impart appearance of strength to malt liquor and spirituous liquors. Yet, by Act of Parliament, no brewer or dealer in beer shall have in his possession or use grains of paradise, under a penalty of 200*l.* for each offence; and no druggist shall sell the substance to a brewer under a penalty of 500*l.* for each offence. Nevertheless, it is both sold and used, principally along with capsicum and juniper-berries, to give a hot strong flavour to London gin; and along with Cocculus Indicus and other bitters, to give a relish and warmth to country beer.

Musk.—Diffusion of Powerful Odours.

It is said that a grain of musk is capable of perfuming for several years a chamber twelve feet square without sustaining any sensible diminution of its volume or weight. But such a chamber contains 2,985,984 inches, and each cubic inch contains 1,000 cubic tenths of an inch, making in all three billions of cubic tenths of an inch. Now, it is probable, indeed almost certain, that each such cubic tenth of an inch of the air of the room contains one or more of the particles of the musk, and that this air has been changed many thousands of times. Imagination recoils before a computation of the number of the particles thus diffused and expended. Yet have they altogether no appreciable weight and magnitude.

Moseley's Illustrations of Science.

Liquorice.

The root of the *Glycyrrhiza glabra*, a plant growing in Spain, yields a great quantity of a very sweet substance called *liquorice*; which is employed to sweeten nauseous drugs, and by itself as a good demulcent. It is much used in coughs, colds, and other affections of the wind-pipe and lungs; and when formed into lozenges containing each about a sixth part of a grain of opium, it forms a very soothing application to the throat and larynx.

The liquorice, when extracted with water, becomes dark-coloured and black in the air. The dried extract is known in this country under the names of Spanish and Italian juice; from the countries in which it is most abundantly produced. It differs in flavour from all the other sugars; it does not crystallise or ferment when yeast is added to it.

Good liquorice juice is black, dry, easily broken (in cold weather), with a shining fracture. It should dissolve easily and entirely in the mouth, when pure; but crude liquorice, besides starch and meal, has generally more or less copper, rarely brass, derived from the pans in which it has been boiled; it is, therefore, subjected to purification, and then termed *refined* liquorice. This is done by melting it in water, draining off the

solution, so as to leave the sand or other impurities behind, and in spigrating it; then pouring it into more slender cylinders which are generally soft and moist, even when sugar has been added to them; a better addition is a small quantity of gum Arabic.

For medicinal purposes, the root is largely cultivated at Mitcham, in Surrey. It is also grown at Pontefract, in Yorkshire, where the area of the once famous castle is chiefly liquorice-grounds; and the cakes bear the impression of the castle keep, and are called *Pontefract Cakes*, the preparation of which is carefully attended to. More than 500 tons of liquorice are imported in a year. The principal consumption is said to be by brewers in the manufacture of porter.

Properties of the Hop.

The hop is a perennial plant, the female inflorescence of which forms the substance called hops, the use of which in brewing is so well known. The female flowers, called cones, strobuli, or catkins of this plant, when ripe, constitute the *hops*, which, independent of their employment in brewing, are of considerable utility in medicine. The mature hops consist of a number of imbricated membranous scales, having the fruit at their base; the surface, both of the scales and of the fruit, is studded with aromatic glands, which prepare a material bearing considerable resemblance to the pollen of the anthers, and termed *lupuline*. This is the most valuable part, as in it reside the essential properties of the hop; it possesses a cellular structure, and in the cells are contained volatile oil, resin, a bitter principle, with tannin, and a trace of malic acid, with acetate and hydrochlorate and sulphate of ammonia.

Dr. Paris considers the superiority of the hop as an ingredient in our malt liquor to depend upon the fact of its containing within itself several distinct and independent elements of activity, which the bitter herbs that have at different times been employed as a substitute do not possess. The bitter principle imparts to the beverage a tonic quality and an

agreeable flavour; while, at the same time, an aromatic ingredient adds a warmth and stimulating property, and modifies the bitterness; it likewise contains an astringent principle (tannin) the effects of which are to precipitate the vegetable mucilage, and thus to remove from the beer the active principle of its fermentation; every attempt, therefore, to substitute an ordinary bitter for that of the hop, must necessarily fail, unless a compound can be so artfully constructed as to contain in due proportions the principles of bitterness, astringency, and aroma.

The aromatic bitter gives to the hop a marked power over the digestive organs when debilitated. A narcotic property has been ascribed to this article, which is denied to it by some writers, who attribute the intoxicating power of beer entirely to the alcohol and carbonic acid which it contains. Yet, there can be no doubt that tincture of hops, and even extract of hops, possess sedative powers, and often procure quiet and sleep, where opium cannot be borne. Decoction does not seem to be a judicious mode of preparation, and should not be practised. Lupuline has been administered alone, but this does not possess any advantages over the common plan.

The pillow of hops was formerly recommended to produce sleep, from one of the most active ingredients of the hop, which is a narcotic, essential oil, which gives the flower its peculiar smell; the other properties of the hop are a yellow resin, and the bitter principle possessed of peculiar medicinal qualities, which chemists call *lupuline.* These substances are chiefly confined to the yellow grains scattered over the scales of the cones.

The Rev. John Ward, Vicar of Stratford-upon-Avon in Shakspeare's time, says, 'Wee have utterly lost what was the thing which preserved beer so long, before hops were found out in England.'

Elecampane.

Of this plant, *Helenium*, *Inula*, or *Enula campana*, all the old herbals speak in high terms of commendation. In Germany

a wine made of it is in great esteem. It was accounted warm, opening, detersive, and efficacious in diseases of the lungs. Dr. Hill even says that hardly any plant has more virtue, but that its greatest virtue is in curing coughs. An infusion of the fresh root with honey was found very successful in hooping cough. For these purposes it was also made into candy, and gradually became a mere sweet thing for children; so that now its medicinal virtues are forgotten, and it is sold merely as a candy in confectioners' shops with no more of the plant in it than there is of barley in what is now sold as barley-sugar.

The virtue of elecampane was celebrated in an old distich:—

Enula campana reddit præcordia sana.

The German name is *Alantivurzel.* In a German herbal of 1589, it is proclaimed good against the Plague, and pestilential diseases. The author seeks to identify it with the herb *moly.* He says that many valuable medicines may be prepared with elecampane, and principally for asthma, hard breathing, and dry cough, for which he directs the composition of an electuary. He further recommends it to be candied like *Angelisa*, and eaten morning and evening for asthmatical complaints. He very amusingly tells his readers that it has long been customary in Switzerland, Swabia, and Bavaria, to keep a piece of elecampane root in the mouth in the morning fasting, and that the same is customary on the Rhine and other waters, against poisonous exhalations and bad air. He has several more medical uses for elecampane, but all these old real or supposed virtues are now forgotten. The article sold under this name some five-and-forty years ago in London, was not a fluid but a solid, principally composed of sugar, and coloured with cochineal. This having been melted by heat, was poured into a shallow tin dish and allowed to cool, when it formed a hard and brittle cake, of about one eighth of an inch in thickness. It was not so tough as the kindred compounds, hardbake and toffy, being easily broken either by the hand or a slight pressure of the teeth. A correspondent of 'Notes and Queries' saw in 1870, at the village of Castleton in Derbyshire, on Easter Monday, that every child, without exception, had a bottle of

mixture—the younger ones having one tied around their necks —all sucking away at this curious compound of Spanish (liquorice?) juice, sugar and water, and it was stated to have been an Easter custom at Castleton from time immemorial.

Hanne-bane; Hyocyamus.

Here are two words wrongly spelt, according to our notions. Our English word *henbane* is supposed to indicate a plant which is fatal to domestic fowls; but nobody makes out that the hens ever eat it. In Gerard's 'Herbal' (1597) *hanne-bane* is given as the only French word for what they now call *jusquiame*, from the Italian *jusquiamo*. In the Academy's Dictionary *hane-bane* and *hene-bene* are given as obsolete forms for which reference is made to *jusquiame*. Neither *hanne* or *bane* has separate recognition from the Academy, nor does either occur in any compound except one, as far as I can find. It may be suspected that a form of the old word is seen in that 'hebenon' with which the Danish Cain murders his brother. The Greek word means *hog-bean*. Now, ὑο is the crude form of *hog*, and κυαμος is *bean*; hence ὑοκυαμος (hyocyamus) should be the word: analogous with ὑοπολος, ὑοειδης, &c. The common form ὑοσκυαμος (hyoscyamus), with the full genitive ὑος, is just such a word as we see in horses-radish, cow's heel, gooses-berry, &c. It is true that the insertion may only be intended to avoid a number of short syllables coming together, as seems to be done in ὑοπολος, &c. But we need not preserve what to a Greek ear was only euphonic, to the confusion of etymology. It would surely be desirable to write *hyocyamus*.

A. De Morgan, Athenæum.

Ipecacuanha.

The root of this plant, which is found in Brazil, furnishes us with one of the best and safest emetics. The introduction of this celebrated root into medical practice was chiefly owing to Helvetius, grandfather of the author of the work 'De l'Esprit,' who came from Holland to Paris very young to practise medicine. He attended and cured a drug-merchant, who paid him

with a packet of the root from Brazil, called Ipecacuanha. After some experiments in the hospitals, Helvetius found it possessed the virtue of curing dysentry. Before the end of thirty-two years, he had made 100,000 crowns by curing that disease. Louis XIV. gave him a thousand louis for his secret. By its success it obtained the name of *Radix anti-dysentrica.*

Saffron, its History and Economy.

Saffron consists of the dried stigmas of the *Crocus cativa*, a native of Asia Minor. It was formerly cultivated in Essex, so as to give to one of its ancient towns the epithet of *Saffron (Walden)*. Harkluyt was told at Saffron Walden that a pilgrim brought from the Levant to England, in the reign of Edward III., the first root of Saffron, which he had found means to conceal in his staff made hollow for that purpose; 'and so,' says Harkluyt, 'he brought this root into this realm with venture of his life; for, if he had been taken, by the law of the country from whence it came, he had died for the fact.'

The culture of Saffron at Saffron Walden has been long abandoned: it must have been costly, for we find the Corporation of Saffron Walden paying five guineas for a pound of Saffron, to present to Queen Elizabeth upon her visit to the place. Nearly 40,000 flowers are required to yield one pound of Saffron; the old statement that 203,920 were requisite is a gross exaggeration. Saffron Hill, in the parish of St. Andrew's, Holborn, was formerly part of the garden of Ely House, and derives its name from the crops of Saffron which it once bore.

Beckmann has a curious chapter upon the ancient history of Saffron, and its medicinal use among the Orientals: the Europeans, who adopted the pharmacy of the Greeks, sent to the Levant for Saffron, until they learnt to rear it themselves; and in Hertodt's *Crocologia*, Jena, 1670, may be found the several uses of Saffron, even to the simplest form of preparing it. The ancients employed it strangely as a perfume, strewing their halls, theatres, and courts with it, and preparing with it scented salves.

The medicinal properties of Saffron are chiefly due to its

volatile oil: the *Hay Saffron* is now only in demand, the *Cake Saffron* being an artificial compound of the florets of the saffron-flower, made up with gum, &c. and pressed into layers. Saffron formerly enjoyed high repute, both as a perfume, and as a nervine, stomachic, and narcotic drug. Its odour may affect some very susceptible individuals; and we have known saffron to be worn in silken bags to prevent infection. It is still a popular remedy for eruptive diseases, as measles,—a remnant of the old doctrine of colours; and to the same notion is to be referred the giving Saffron to canary-birds when moulting, a practice reprobated by Bechstein, who judiciously recommends iron to be put in the water at such times. On the Continent Saffron is used as a condiment for food; in England it is employed to colour cheese and confectionery, and as a dye.

The colour appears to have been forbidden at one time by law; for in 1446, a parliament, held at Trim, forbade the Irish to wear shirts stained with saffron, which they seem hitherto to have worn without any change till they dropped off their backs. Saffron was much used in the yellow starch so fashionable in England in the seventeenth century.

Saffron was also used to colour the Warden-Pear Pies, mentioned by Shakspeare:

> I must have saffron, to colour the warden-pies.

Henry says: 'Saffron must be put into all Lent soups, sauces, and dishes: without Saffron we cannot have well-cooked *peas*.' In John Tradescant's catalogue of his garden at South Lambeth, we find 'meadow saffrons from Constantinople.'

From Things not generally known, 2nd Series.

'Naked boys' is the Wiltshire name for meadow saffron, or colchicum, 'which,' says Ray, 'I do not remember ever to have seen in any other sort of Saffron growing wild in England.'

Sage Tea and Sage Wine.

Sage has lost much of its medicinal reputation since the age of Charlemagne, when the School of Salerno thought so highly of it as to leave this dictum of old Saracenic pharmacy:

Cur moriatur homo cum Salvia crescit in horto? (Why should man die when Sage flourishes in the garden?)

Sage is a plant having a warm, aromatic taste and smell, and is sometimes eaten between bread and butter in the morning, for its bitterness and astringency. It is also taken in the form of infusions, and drunk like tea, for its stimulant, carminative, and tonic effects. With a little lemon-juice, sage tea is used as a diluting drink in feverish disorders. The Chinese are said to prefer the infusion of sage-leaves to that of their own tea; and the Dutch once carried on a profitable trade by carrying sage-leaves to China, and bringing back four times the weight of tea-leaves. Clary is a kind of sage: it is used for making wine which resembles Frontignac, and is remarkable for its narcotic qualities.

Sage Wine is made by boiling three gallons of water and six pounds of loaf sugar, and, as the scum rises, take it off; pour the sugar and water in a tub, boiling hot, upon a gallon of red sage-leaves, picked and washed. When the liquor is nearly cold, put in the juice of four large lemons, beaten with a little ale yeast; cover it closely, and let it stand 48 hours; then strain it through a hair sieve into a vessel that will just hold it; when it has done working, stop it down closely, and in three weeks or a month bottle it, putting a lump of loaf sugar into each bottle. This wine is best when three months old.

Figs.

The *Ficus Carica* of botanists is a small tree with rough, lobed, deciduous leaves, naturally inhabiting the temperate parts of Asia, and more commonly cultivated in Europe for the sake of its fruit. In the fertile islands of the Mediterranean, in Spain, Italy, and Greece, and even so far as the south of France, the fruit is so well ripened as to form a valuable article of exportation into Great Britain alone. The fig is grown with some success even in the southern and milder parts of England, but is seldom found in the northern parts, or in Scotland, except under glass.

The best figs are brought from Turkey; many from the

south of France, where they dry them by exposure to the sun, after dipping them in hot ley, made with the ashes of the fig-tree. The recent fruit, completely ripe, is soft, succulent, and easily digested, unless eaten in immoderate quantities, when it is apt to occasion flatulency, pain of the stomach, and diarrhœa. Figs are very nutritious, as their sugar is united with a large portion of mucilaginous matter, grateful to the stomach, and easier to digest than any of the other sweet fruits. Figs are used in medicine as emollients, and as an ingredient in pectoral decoctions; they are also used as cataplasms to promote suppuration. They are applied, as warm as can be borne, to gum-boils, and other parts, where poultices cannot be confined.

The medicinal use of figs is of scriptural antiquity. The first cataplasm on record is that which was used by King Hezekiah, who lived 260 years before Hippocrates. 'Isaiah said, Take a lump of figs; and they took it, and laid it on the boil; and he recovered.'—2 *Kings*, xx.7.

The fig-tree is very apt to throw off its fruit before it ripens, and various methods have been suggested to prevent this. In the Levant, to insure a crop, a process termed *caprification* is resorted to, which consists in placing among the cultivated figs branches of the wild fig, in which a kind of Cynips abounds. This insect, issuing from the wild fruit, enters the others, brushing about the pollen in the inside, and so fertilizing the fruit. Or, those figs that drop prematurely, and are chiefly filled with the male flowers, are preserved and introduced among the green growing figs, with a view to their pollen being carried by insects to the flowers where they are wanted.

Fig-Sunday is a popular name for the Sunday before Easter, perhaps in allusion to our Saviour's desire to eat the fruit of the fig-tree on his way from Bethany, on the Monday following. Hence, in certain parts of England, by rich and poor, figs are eaten on this day. Miss Baker, in her 'Northamptonshire Glossary,' 1854, states that on the Saturday preceding the above day 'the market at Northampton is abundantly supplied with figs, and there are more purchased at this time than throughout the rest of the year; even the charity-children in some places are regaled with them.' Hone, in his 'Year-book,'

states that it has long been the custom for the inhabitants to eat figs on this day at Kempton in Hertfordshire, where they also keep wassail, and make merry; and we remember the fig observance as common in our school-days, in the same county, at Hemel Hempstead, some twenty years before Hone wrote, as above.

Fig-pies were formerly eaten in Lancashire on Fig-pie Sunday, in Lent; they consisted of sugar, treacle, and dried figs. In Staffordshire, they were eaten on Mid-Lent Sunday.

The proverbial history of the fig is interesting. *To give the fig* was anciently an expression of contempt or insult, which consisted in thrusting the thumb between two of the closed fingers, or into the mouth; whence, *bite the thumb.* The custom is generally regarded as originally Spanish. According to some authors, it conveyed an insulting allusion to a contemptuous punishment inflicted on the Milanese, by the Emperor Frederic Barbarossa, in 1162, when he took their city. But this has much of the air of a fable, and the Spanish expression for it, *Dar una higa*, does not support it; for *higo* is a fig, not *higa*; though the similarity of the words may have caused the error or equivoque; and the same exists in Italian. The same phrase and allusion pervades all modern Europe.

A fig for you, is still known as a familiar expression of contempt; and must have arisen from the other, as figs were never so common here as to be proverbially worthless. Be this as it may, the persuasion that *the fig* was of Spanish origin, was here very prevalent. Hence, Pistol says:

> A figo for thy friendship!—
> The *fig* of Spain.—Shakspeare's *Hen. V.*, Act iii. Scene 6.

And again, 'When Pistol lies, do this [i e. make the action of reproach], and *fig* me, like the bragging Spaniard.'—2 *Hen. IV.*, Act v., Scene 3.

> And so farewell, I will returne
> To Lady Hope agayne,
> And for a token, I thee sende
> A doting *fig of Spayne.*
> *Ulp. Fulw. Art of Flattery*, c. iv.

But there was a worse kind of Spanish fig, the notoriousness of which, perhaps, occasioned some confusion, so that one fig was mistaken for the other. This was the *poisoned fig*, employed in Spain as a secret way of destroying an obnoxious person. To this fatal fig many passages unequivocally refer :

> There, there's the mischief; I must poison him.
> One fig sends him to Erebus.—*Shirley, Brothers*, vol. iii. p. 37.

The Earliest Fruits.

All the writers of antiquity agree in putting the fig at the head of the fruit-trees first cultivated ; and next, the vine, the fruit of which serves for food, as well as for drink ; and it appears, from the complaints of the Israelites in the Wilderness, that the fig, grape, and olive were known in Egypt from time immemorial. Leeks, onions, and garlic, together with cucumbers and melons, appear to have been in use in Egypt at a very early period (Num. xi. 5). Moses, from his description of the garden of Eden, and his direction as to the culture of the vine in Canaan, seems not only to have been a tasteful, but a judicious husbandman. He directs, that after planting the vine and the fig, the trees should not be allowed to ripen any fruit for the first three years, 'the produce of the fourth is for the Lord,' and it is not till the fifth year that it may be eaten by the planter. This trait of Canaanitish culture must have contributed materially to the flourishing of fruit trees.

The gardens of Alcinous are said to have contained pears, pomegranates, figs, olives, and other fruits 'brilliant to the sight,' probably citrons or oranges. The culinary vegetables are not particularised, but they were planted in beds. It matters little that these gardens are fabulous : it is enough that the fruits mentioned were known in the days of Homer.

In the 'One Hundred Points of Tusser,' is given a list of the fruits and culinary vegetables then known, under the following heads : 'Swedes and herbes for the kychen, herbes and rootes for sallets and sawce, herbes and rootes to boyle or to butter, strewing herbes to still in summer, necessarie herbes to grow in the garden, for physick, not reherst before.' In the

whole he enumerates more than 150 species, besides a copious catalogue of fruits; which—with the exception of the fig, orange, and pomegranate, introduced a few years afterwards, the musk-melon, about the end of the sixteenth century, and the pine-apple, at the beginning of the last century—include all the species at present cultivated in British gardens.

The fertility of the soil of England was depreciated by some in Tusser's time, probably, as Dr. Pulteney conjectures, from seeing the superior productions brought from Holland and France. Dr. Boleyn, a contemporary of Tusser, defends it, saying, 'we had apples, pears, cherries, plums and hops, of our own growth, before the importation of these articles into England by the London and Kentish gardeners,' but that the cultivation of them had been much neglected. Oldys, speaking of Gerarde's garden, and alluding to the same subject, considers it as a proof 'that our ground could produce other fruits, besides hips and haws, acorns and pignuts.' Gerarde was an apothecary; his physic gardens were in Holborn and Old Street, and were rich in every useful and ornamental plant.

Early Roman Gardening.

The Romans, it is conjectured from some epigrams in Martial, and from the way in which cucumbers are mentioned by Pliny and Columella, had even arrived at the luxury of forcing vegetables. The *lapis specularis*, we are informed, could be split into thin plates, which supplied the place of glass frames. By means of these, Tiberius, who was fond of cucumbers, had a succession of them throughout the year. They were grown, Columella tells us, in baskets of warm horse-dung covered with earth, placed out of doors in fine weather, and taken in at night. Sir Joseph Banks thinks it probable that grapes and peaches were also forced, and that the Romans had hot walls, as they were well acquainted with the use of flues.

Pliny informs us that the husbandman called his kitchen-garden 'a second dessert,' or 'a flitch of bacon, which was always ready to be cut,' or 'a salad easy to be cooked and

light of digestion,' and judged there must be a bad house-wife where the garden (her special charge) was in disorder.

The horticulture of the Romans was entirely empirical, and carried on with the superstitious observances dictated by Polytheism. Varro directs his friend to adore Venus as the patroness of the garden, and to observe lunar days; some things, he adds, are to be done while the moon is increasing; and others, as the cutting of corn and underwood, when she is on the decrease. 'I attend to these regulations piously,' says Agrasius, 'not only in shearing my sheep, but in cutting my hair; for I might become bald if I did not do this in the wane of the moon.' We are informed by Columella, that husbandmen, who were more religious than ordinary when they sowed turnips, prayed that they might grow both for themselves and their neighbours. 'If caterpillars attack them,' he adds, with suitable gravity, 'a woman going with her hair loose, and bare footed, will kill them; but women must not be admitted where cucumbers or gourds are planted, for commonly green things languish and are checked in their growth by their handling them.'

The Wonders of Ginseng.

Ginseng is a root found in China, to which extraordinary properties have been ascribed; it is not only considered a universal remedy for all maladies, but is spoken of in the highest terms as a specific in particular circumstances. Volumes have been written in Chinese upon the supposed virtues of the root: it is affirmed that it wards off fatigue, invigorates the enfeebled frame, restores the exhausted animal powers, makes old people young, and so on. The weight in gold has been given by the Chinese for this root, which, we are told, grows only in the most remote and inacessible parts of Chinese Tartary, where its collection is attended by dangers sufficient to appal the stoutest man. Nevertheless, botanists believe the Ginseng to be nothing more than a plant called *Panax quinquefolium*, also found in North America, where no such qualities as those spoken of by the Chinese are recognised. It is, however, not certain that this identification is correct; indeed, it is

hardly to be supposed that such extraordinary faith in the energies of the plant can be altogether destitute of foundation. Nothing better deserves scientific investigation.

This strange root has for ages been extolled in China as an universal medicine or panacea. The genuine Mantchurian Ginseng consists of a stem, from which the leaves spring; of a centre root, and of two roots branching off at the same point from each side of the centre root. The stem somewhat resembles the head and neck, the side roots the shoulders and arms of a man; the main root represents the body; and a fork which the main root frequently forms supplies the legs. The Chinese, with a not ungraceful feeling, believe that a plant which thus expands into the human form, amid thickets and jungles on which the foot of man never trod, must be intended to alleviate the sufferings of the human race. For Ginseng loves the moist, dense forests which cling to the slopes of the hills; it nestles in recesses which are as pathless now as in the days when the Golden Tartars were dwelling in the plain. Fine Mantchurian Ginseng is only found in the upper valley of the Usuri, where ruined towns and forts mark the cradle of the race which occupies the Imperial throne.

The qualities of Ginseng are increased and intensified by age, and a plant is of no great value until it has been growing and gathering strength for at least an ordinary lifetime. The upper portions of the root possess the healing power; the stem which appears above ground ought not to be eaten. Formerly the collection of Ginseng was in the hands of some forty merchants, who obtained the necessary authority from the Tartar General of Kirin on payment of a heavy fee, handing over to Government also a certain weight of the product of the search. The merchants employed outlaws, whom the fear of punishment had driven to take refuge in these wilds, and who underwent great hardships in the task, menaced by starvation, and by the wolf, the tiger, and the leopard. But in the time of Taukuang, Ginseng was becoming yearly more scarce, and plants of any great age were rarely found. In order to arrest their utter extinction the collection of the wild root was prohibited by Imperial edict. Neverthe-

less, a very small quantity is still clandestinely collected—to a considerable extent, however, in Russian territory. It is said that a bit of the root chewed by a man running a race will prevent his competitor from getting the start of him. It is somewhat singular that the same property is attributed to garlic; and the Hungarian jockeys frequently tie a clove of it to their racers' bits, when the horses that run against them fall back the moment they breathe the offensive odour. It has been proved that no horse will eat in a manger if the mouth of any other steed in the stable has been rubbed with the juice of this plant. Dr. Millingen had occasion to ascertain this fact. 'A horse of mine,' he says, 'was in the same stall with one belonging to a brother officer; mine fell away and refused his food, while his companion throve uncommonly well. I at last discovered that a German groom, who had charge of the prosperous animal, had recourse to this vile stratagem. It is also supposed that men who eat garlic knock up upon a march the soldiers who have not made use of it. Hence, in the old regulations of the French armies, there existed an order to prohibit the use of garlic when troops were on a march.'

Old Physic Gardens in London.[1]

Holborn (Old-bourne) was famed for its gardens: Ely-place had its kitchen and flower gardens, vineyard and orchard, and the bishops were celebrated for raising choice fruit. We have to this day a pear called 'Bishop's Thumb.' Gerarde the apothecary, before the year 1597 had a large physic-garden near his house in Holborn, where he raised 1,000 plants and trees; Gerarde's earliest publication was the Catalogue (in Latin) of his own garden in Holborn, printed in 1596, 4to.; reprinted in 4to. 1599. The first edition was dedicated to Lord Burghley, whose garden Gerarde had superintended for twenty years: the second edition was dedicated to Sir Walter Raleigh. A copy of the first edition (of extreme rarity) is in the British Museum; and it proved of great use to Mr. Aiton in preparing his 'Hortus Kewensis,' by

[1] Chiefly abridged from 'Curiosities of London,' enlarged edit., 1868.

enabling him to ascertain the time when many old plants were first cultivated. Gerarde dated the first edition of his 'Herbal' from Holborn. Wood calls him 'the best herbalist of his time.' Among the Lansdowne MSS. in the British Museum, is a letter of Gerarde's own drawing-up, for Lord Burghley to recommend to the University of Cambridge the establishment of a physic-garden there, to encourage the 'facultie of simpling.' Several London localities of Gerarde's *simpling* may be gathered from his 'Herbal.' Thus, he says: 'Of water violets I have not found any such plenty in any one place as in the water ditches adjoining to Saint George his fielde, near London.' He describes Mile End, Whitechapel, as 'the common near London where penny-royal grows in great abundance.' 'The small wild buglosse grows upon the drie ditch bank about Pickadilla;' and he found 'white saxifrage, burr-reedes, &c.,' in the ditch, right against the place of execution, St. Thomas-a-Waterings, now the Old Kent Road.

Tradescant's garden at South Lambeth was well stored with rare and curious plants collected in his travels: including roses from Rose Island, near Port St. Nicholas. This garden existed in 1749, and is described in 'Philos. Trans.' vol. xlvi. Tradescant was 'King's Gardener,' *temp.* Charles I.; and, with his son, assembled at Lambeth the rarities which became the nucleus of the Ashmolean Museum.

In the Catalogue of their garden, published by the second Tradescant, are Hollyhocks, Southernwood, Wormwood, the classical Acanthus, Prince's Feathers; that 'great Flouramour, or purple flowre gentle;' Anemones of all sorts; Dogsbane; the 'Arbor Judæ, or Judas Tree, with red flowres;' the Birthworts of the south; numerous North-American plants; meadow Saffrons from Constantinople; that 'Fragraria Novæ Angliæ nondam descripta,' the mother of our Keens, Seedlings, and Scarlet and British Queen Strawberries; the 'Hippomarathrum,' or Rhubarb of the Monks; Marvels of Peru; 'Paralysis fatua, foolish Cowslip, or Jack-an-apes on Horseback,' probably the green monster of the common Oxlip; Pappas, or Virginian Potatoes; 'Populus alba Virginiana Tradescanti,' apparently one of our Tacamahacs; Musk Roses,

Double Yellow Roses, and 'Muscovie Roses;' Fox Grapes, from Virginia; White and Red Burlett Grapes, Currant Grape, Muscadells, 'Frontinack or Musked Grape, white and red;' and other rarities, filling more than 100 pages.

Gardener's Chronicle, 1852.

Fleabane.

Does any one remember a hardy herbaceous plant, of no mean beauty, once called *Chrysanthemum coccineum* and afterwards *Pyrethrum carneum*?—a bright-green tufted thing, with rose-coloured flower-heads as large as a half-crown, and leaves not unlike camomile, for which reason it is called on the Continent *Camomille rouge*. This is one of certain plants which are reputed to *drive away fleas*. One of our common roadside plants is called Fleabane (*Inula pulicaria*), which, says Dodoens, an old Flemish herbalist, 'laid, strowed, or burned in any place, driveth away all venomous beasts, and killeth knats and flees.' We are also assured by a certain Professor Cantraine that the common ox-eye daisy (*Chrysanthemum leucanthemum*), which whitens the meadows of slovenly farmers in early autumn, is used in Bosnia and Dalmatia as a specific against such unpleasant visitors. Professor Morren confirmed the fact of the ox-eye daisy being *pulicifugous*, *i.e.*, repellent of fleas, by his own personal experience at Liège. But it seems that Caucasian, Persian, and Koordish fleas have a still worse enemy in the beautiful red pyrethrum, of the flower-heads of which is made the Persian flea-powder, which 'not only causes the death of all sorts of disagreeable or injurious insects, but when distilled yields a spirit, of which a small quantity mixed with water may be used with the greatest success in the open air or in greenhouses against green-fly, house-flies, &c., without doing the least injury to plants.' A powder of pyrethrum is very largely used as a Fleabane among the nations of Western Asia. It begins to flower in June, and lasts for more than a month. In dry weather the flower-heads are hand-plucked. They should be dried in the shade three or four days. Five-and-thirty tons of this flea-powder are manufactured annually for Russian use in Transcaucasia alone. More than twenty villages in the dis-

trict of Alexandropol are occupied with the cultivation of the red camomile, whose powder will preserve them from fleas, will kill flies, gnats, &c. When winged creatures are to be dealt with, the powder is to be mixed with any substance which they like, such as sugar when house-flies are to be killed. Of this powder, it is believed, there is a specimen in the museum at Kew, sent to this country from Erzeroum by Mr. H. Calvert, with the following memorandum: 'Piré-oti (which means Fleawort) is exported from Koordistan to various parts of Turkey for the destruction of fleas, which it certainly accomplishes most effectually. It suffices to strew some of the powder inside a bed, or over a sofa or carpet, to kill or drive away the intruders. The English and French officers made an excellent use of this drug in the Turkish barracks.'

Abridged from the Gardener's Chronicle.

Plant Virtues.

This piece of olden philosophy, by Shakspeare, is from the Friar's beautiful soliloquy, in 'Romeo and Juliet,' act ii. sc. 3.

The earth, that's nature's mother, is her tomb;
What is her burying grave, that is her womb:
And from her womb, children of divers kind
We sucking on her natural bosom find:
Many for virtues excellent,
None but for some, and yet all different.
O mickle is the powerful grace that lies
In herbs, plants, stones, and their true qualities:
For naught so vile that on the earth doth live,
But to the earth some special good doth give;
Nor aught so good, but, strain'd from their fair use,
Revolts from true birth, stumbling on abuse;
Virtue itself turns vice, being misapplied;
And vice sometime's by action dignified.
Within the infant rind of this weak flower,
Poison hath residence and med'cine power:
For this, being smelt, with that part cheers each part;
Being tasted, slays all senses with the heart.
Two such opposed kings encamp them still
In man as well as herbs—grace and rude will;
And, where the worser is predominant,
Full soon the canker death eats up that plant.

An Old Naturalist.

Alexander Neckam, one of our mediæval writers upon Natural History, was a native of St. Albans, born on the same night as Richard Cœur de Lion, and suckled at the same breast. He became a distinguished Professor at the University of Paris, and was afterwards elected Abbot of Cirencester. His treatise, 'De Naturis Rerum,' is chiefly interesting at the present time on account of the number of curious anecdotes illustrative of natural history with which it abounds. Many of them are of course fabulous; but they enable us to appreciate the peculiar characteristics of the time, and they especially teach us 'how great was the love of animals in the middle ages, how ready people of all classes were to observe and note the peculiarities of animated nature, and especially how fond they were of tamed and domestic animals. The mediæval castles and great mansions were like so many menageries of rare beasts and birds of all kinds.' Another characteristic of Neckam, which he shares in common with his contemporaries, is his passion for discovering a moral or a mystical application in every scientific fact. For example, God placed spots on the moon that, as the celestial body neared the earth, it might be a sign to man that he also retained spots in his nature contracted from the 'prevarication in our first parents.' This love for symbolism causes his philological observations to be ingenious rather than true. Cadaver, a carcase, consists, he tells us, of three syllables representing three distinct words—*ca* represents *caro*, *da data*, and *ver vermibus*; thus the elements which make up the Latin word for carcase imply, when decomposed and reconstructed, 'flesh given to the worms'—a really astonishing coincidence. Still more wondeful is his discovery of the whole doctrine of the Trinity in the first word of the book of Genesis in Hebrew. Neckam was a precursor of Bacon. Bacon speaks of him respectfully, but declines to admit him as an authority.

Times.

Odour of Flowers.

The idea that Perfumes of Flowers, believed to be universally delightful, should offend certain perceptions is often held up to ridicule and unbelief. But the following observations furnish evidence to correct this common error. They occur in Sir James Smith's valuable 'Elements.' He describes himself as peculiarly affected by honeysuckles, which however grateful in the open air, affected him in the house with violent pains in the temples, soon followed by sickness, and a partial loss of recollection. Yet the equally delicious and very similar fragrance of the Butterfly Orchis afforded him pleasure in the closest apartment. He could not perceive the scent of *Iris Persica*, though some find it extremely pleasant. Its flowers, nevertheless, affected him in a room almost to nausea and suffocation. The White Lily, Mezereon, Lilac, and Peruvian Heliotrope, with many other scents delightful in the open air, were poison in the house; and he had seen a strong healthy man greatly distressed by one Carnation which had fallen down, and remained concealed by a piece of furniture, in a spacious airy drawing-room. It may be asserted, as a general rule, that plants of the same genus, or natural order, produce by the odour of their flowers a similar effect upon the same person. But this effect often varies in degree, according to any person's state of health. The blossoms of the Portugal Laurel, when abundant, exhale, in Sir James's opinion, a nauseous fœtor, which, in some of the same tribe, as hawthorn, is not too strong to be agreeable, partaking of an almond flavour. In a very different flower, *Bolemonium Cœruleum*, a similar odour, though generally not very remarkable, has proved during illness quite intolerable in a room. Sir James concludes by observing that roses are universally acceptable, and scarcely noxious to anybody; but perhaps the odours of the various kinds of *Stapelia*, imitating carrion, rotten cheese, and foul water, may be better suited to the taste of the Hottentots, n whose country those singular plants abound. A botanist of Sir James's acquaintance could *perceive* no scent in any flower whatever.

Effect of Poisons &c., on Plants.

M. Zeller gives the results of experiments made by him on the effect produced by poisons and other substances, on plants, from which he concludes that not only poisons, but other substances, such as gentian, volatile oils, valerian, camphor, rhubarb, ipecacuhanna, emetic tartar, &c., exercise a deleterious influence on plants. Venomous plants, or such as produce volatile oils, wither and die if made to absorb the poisonous substances of their own production. The narcotic substances, bitter and volatile oils, spirit, spread their influence through the principal vessels of the plants, whence it extends gradually to the circumference of the leaves; nitrate of baryta, on the contrary, emetic tartar, and several other salts, affect first, the edges of the leaves, and thence descend to the other parts of the plant. The action of laurel water, of opium, of the vomic nut, deprives sensitive plants of the power of contracting their leaves; while camphor makes them contract them immediately, not again to open them. Poisons do not produce the same effect on monocotyledonous and dicotyledonous plants; many of the latter suffer much more than the former; the cone-bearing plants are but little sensible to poisons. Such plants as are not destroyed by the action of poison, lose the leaves and branches which have suffered the most by the operation, and afterwards show renewed vigour. Rain and dew appear to have a salutary effect on them. All salts appear very pernicious, if used in large quantities; on the contrary, they are great aids to vegetation when employed sparingly.

THE HEALING ART.

Recent Progress of Medical Science.

Two centuries ago, the qualifications for the practice of the healing art are shown by the clumsiness and cruelty with which operations were then performed; so that we must not feel surprise at the low state of medicine and surgery. Sir William Petty informs us that, even in his time, the proportion of deaths to cures in the Hospitals of St. Bartholomew and St. Thomas was 1 to 7; during 1741 the mortality had diminished to 1 in 10; during 1780, to 1 in 14; during 1813, to 1 in 16; and in 1827, out of 12,494 patients under treatment, only 259 died, or 1 in 48. The Duke of Sussex justly said, in one of his addresses as President of the Royal Society: 'Such is the advantage which has already been derived from the improvement of medical science, that, comparing the value of life, as it is now calculated, to what it was a hundred years ago, it has absolutely doubled.' And Sir Astley Cooper asserted that the human frame was better understood in his time by students than it had previously been by professors.

The question as to the election of the Presidents of the four great hospitals of the City of London having been decided in the Court of Queen's Bench in favour of the Governors, the Prince of Wales became elected President of St. Bartholomew's, and His Royal Highness was inducted into the office on April 10, 1867. There His Royal Highness was escorted to the Great Hall, where about 120 of the governors, including many of the aldermen of London, the whole of the medical staff, and a goodly number of ladies, had assembled to witness the ceremony. His Royal Highness having been conducted

to a seat, the clerk read to him what in the language of the institution is called the 'charge' of a governor. In that the Prince was reminded in effect that it was his duty and charge to acquit himself in that office with all faithfulness and sincerity, and taking care that the affairs and business of the hospital might be well ordered and managed, and promoting 'the weal and advantage of the poor wounded, sick, maimed, diseased persons harboured in the said hospital.' The Prince having received from the hands of the almoners a green staff as an emblem of his power and dignity as a governor, the treasurer (Mr. Foster White), addressing his Royal Highness, said :—It was his great honour and distinguished privilege to welcome His Royal Highness to the presidential chair of this ancient hospital, established now nearly 750 years, and subsequently refounded by Henry VIII., who, in 1547, granted the charter. That early in its history voluntary contributions enhanced the funds of the hospital, and that it was a source of pride to point to the walls of the hall, and see there recorded the names of the benefactors for the last three hundred years. The treasurer stated it to be the largest of the metropolitan hospitals, with 650 beds, and that last year 136,000 patients were relieved ; he also alluded to the medical staff, conspicuous for their constant and humane attention to the poor patients, no less than for their skill and high position in the profession. The 'charge' of the president was read to His Royal Highness by the treasurer, and he was invited to assume the chair as President; the Prince addressed the Governors, and the ceremony terminated.

Improved Surgery.

In a late number (278) of the 'Edinburgh Review' appeared a paper, of immediate interest and value, upon 'The Recent Progress of Medicine and Surgery,' whence have been somewhat abridged the following stand-points.

Next to the improvements in surgical operations, their after-treatment is considered. A meddlesome surgery is becoming equally obnoxious to the intelligent operator. Within the last twenty years the clean sweep that has been made of the salves,

the bandages, the lotions, the strapping, and plasters used by the elder practitioners, is quite refreshing. Surgeons are beginning to put faith in the healing powers of nature—a little lint and cold water how excellent it is!

Sir William Fergusson, with unmitigated contempt, denounces these useless appliances in which the old school had so much faith. Referring to a patient sent to him from the country, he says, 'In this case the practitioner had latterly trusted entirely to the supposed efficacy of a plaister of a waxy and resinous composition. So thickly was it laid on (spread upon leather, and made to cover the clavicle, that some considerable time was required, with a free use of turpentine, to clear all away, so that the part might be properly examined. It was then directly perceived that the only mischief remaining was a small bit of dead bone, which was almost as easily removed as lifting it from the table. The villainous plaister was discarded, water-dressing was applied, and in a fortnight only a scar remained.'

This was a very significant example of the value of the plaister to hide not so much the wound of the patient as the ignorance of the medical attendant.

Disuse of the Lancet.

The most marked and singular change which has taken place in the practice of physic is the utter abolition of the use of the lancet. Sixty years ago, phlebotomy was universally practised in the majority of diseases, and the bleeding-shop was one of the institutions of the country, and was visited in the spring and fall of the year by the people even in good health 'to be blooded.' There seemed to be a popular idea abroad among the people that they could not have too much of a good thing, and that they required a periodical hand at the pump to keep them from foundering. Medical men seemed to have inherited the popular delusion—at all events, their practice was founded upon no scientific data. Now that indiscriminate bleeding has utterly passed away in England, we can only wonder at the astounding drain of blood that was empirically taken from the

people, and speculate upon the mortality it occasioned when resorted to on improper occasions, as indeed is still the case in some other parts of Europe, especially in Italy and in Spain. In Italy a host of illustrious persons, including Cavour and several members of the Royal Family, have fallen victims, even recently, to the use of the lancet.

Some of the records the surgeons of the last generation have left behind them only make us shudder at the blindness with which, in defiance of the evil results, the use of the lancet was persisted in.

We could give pages of examples of the blood-letting mania which infested the old practitioners, and of the persistency with which they ascribed the ill effects to other than the cause they themselves were supplying. We are compelled to say that nothing in the practice of physic is so humiliating to the reasoning physician of the present day as these dreadful examples of the unwise use of the lancet. The reason given for the almost sudden abolition of this instrument is as unreasonable as the practice. It was asserted that the atmospheric conditions at the time of the first advent of cholera, in 1830, produced such an asthenic type among the population—in other words, such a state of debility—that bleeding could not be borne! As we have not again rushed into the old practice, we must conclude that the sudden advent of debility is persistent! To such miserable conclusions haphazard after-thoughts sometimes bring us. Not only is the lancet banished from England, but from Germany and France we hear from Dr. Stromeyer that it has disappeared. That a debilitating influence should have simultaneously overspread Europe is so absurd, that we can only smile when we hear it put forth as the cause of a change in treatment, which, indeed, was due to the good sense of the public.

The Ophthalmoscope.

When the Ophthalmoscope first came before the profession it was rejected by a leading ophthalmic surgeon as a mere 'useless toy,' whereas it is now recognised as of the utmost

value. By its aid we can discover the condition of the cerebral circulation, and the condition of the optic nerve. Not only in diseases of the eye its value is great, but it has become a necessity for the physician in brain diseases. Epilepsy, and that terrible malady general paralysis, and even Bright's Disease, can now be diagnosed by looking into the eye with this instrument at the optic nerve, and the beautiful reticulations of the arteries which are seen on the optic disc. The 'useless toy' answers many questions as to what is going on in the brain, which before we could only darkly guess at.

Improvement in Medicines.

We can all remember the nauseous drugs with which we were dosed, say some thirty years ago. The woody fibres we were forced to swallow, the gritty substances we could not swallow, the powders which never could be washed out of the mouth! Not only were they dreadful in quality, but the quantity was appalling. Both the physician and the general practitioner must share the blame as regards the excess with which they were supplied. A prescription of a physician of the old school was a dispensary in itself. The countless ingredients, the action of which under the effect of the gastric secretions were often of a conflicting character, without doubt produced symptoms that puzzled him as much as the patient. The tendency in the present day is in the other direction. A wiser instinct has taught simplicity; indeed, there is a growing reliance upon what we may term natural medicine, instead of mere medicaments. Change of air, water, and scene, the influence of the mind upon the body, now enter largely into the repertory of the physician. He is beginning to see that many curative agents are required to set his patient up in health again, inasmuch as many have been the cause of casting him down from it; and he practically admits that these agents require to act through a longer space of time. Hence extended holidays and prolonged travel, which increase the health even of the most robust.

Drugs Discovered During the Last Half Century.

Among these may be found, first and foremost, cod liver oil, that has stayed the hand of the destroyer in many a patient that would otherwise have succumbed to pulmonary disease; iodine, gallic acid, and hydrocyanic acid have proved of great value; and last, but not least, we credit the medicinal profession with the introduction of electricity as a most potent agent in rousing the vital powers of the system. Day by day, its potency in reviving the failing nervous system is becoming more apparent. Faradization, or the freezing of the constant current, is the best stimulant known, in rousing the paralysed limb, and in cases where the heart's action has stopped, the current has once more set the machine of life going again. By the hydrate of chloral, on the other hand, over-action of the nervous system is met and checked, and all the evils of opium-sickness, constipation and headache are avoided. But in addition to these actual additions to the agents by which the physician fights disease, we must allude to the much more effective and scientific method in which he applies them. The modern discovery of the alkaloids, or the active medicinal principles of our vegetable 'Materia Medica,' is very important. Instead of coarse bark that used to choke us when we were attacked with ague or weakness, science now presents us with the elegant quinine. Instead of the nauseating dose of jalap, an infinitesimal portion of jalapine is far more effectual; and morphia with a drop deals with our senses, where the larger dose of opium defeated its object by refusing to remain upon the stomach. Even the mode of action of this drug has been greatly improved of late years. In cases of neuralgic pains and spasmodic agonies, subcutaneous injection of the drug now acts at once effectually upon the local affection, without having to go the roundabout way to give a cure through the system generally.

'Doctors' Bills,' and Homœopathy.

The general practitioner dealing with what we may term the middle strata of the population, has been moved to a reform

by another motive, which is quite as potent as the scientific one. The habit of charging his time has taken the place of the old abominable practice of simply sending in his bill for medicines supplied. It is true this great reform applies more to towns than to the country, where the medical man is obliged to act as chemist as well as doctor; but even when he is obliged to dispense his own medicaments, the habit is growing of charging rather for the number of bottles he crowds upon his unhappy patients. We think there can be little doubt that the practice of homœopathy has had something to do with this change. When a certain enthusiastic class of the population took up this new doctrine, and it was seen by perfect abstention from physic (for the infinitesimal doses given practically amounted to this), the patients, in the majority of cases, where some simple derangement of the system existed, got well: the lesson taught was twofold—in such cases, the corrective value of drugs was of secondary importance, and the power of the mind over the body was the primary cause of cure. Faith in the physician—what a power it is! and he who can command it may throw much of his physic to the dogs.

Edinburgh Review, No. 278.

The cogency of these reasonings has induced me to extend them beyond the customary limit of quotation.

Dr. Gardner, in his able paper on homœopathy, in the *Edinburgh Essays*, 1856, remarks, with well-placed humour, 'this strange doctrine' was only feebly expressed by Lord Jeffrey, when he said that an ounce of medicine put into the Rhone at the upper end of the Lake of Geneva would physic all the Calvinists at the lower end.'

STUDY OF INSANITY.

Dr. Willis on Insanity.

Dr. Francis Willis, who studied at Oxford, and took holy orders in 1740, was soon after appointed to the living of St. John's, Wapping, and afterwards to Greatford in Lincolnshire. Having a taste for the practice of medicine, he used to prescribe for his poor parishioners, which incensed the medical men in the neighbourhood so much, that in his own defence he obtained the degree of doctor of medicine from Oxford in 1750. His medical and theological studies induced him to take up the subject of insanity, and he was very successful in its treatment. It was on this account that he was called in to take charge of George III., when the king was for the first time deprived of the use of his mental faculties. His treatment was successful in this case, and gained for him a great reputation, in addition to a pension of 1,500*l.* per annum for twenty-one years. After curing the king, he was sent for to attend the Queen of Portugal, who was labouring under aberration of mind, he succeeded in restoring her majesty to perfect health, and received for his services 20,000*l.* He kept an establishment for the treatment of the insane at Greatford, in Lincolnshire, where he died on December 5, 1807, in the 96th year of his age.

Willis has left behind him no work on the subject of insanity, and he would perhaps have found it difficult to explain his own success in the treatment of this disease. He was a man of acute mind, and his treatment seemed rather the result of an instructive perception of what each individual case required, than of the application of any known principles. His personal

influence over his patients was immense, and it is said that his mode of looking at a maniac 'would make him quail more effectually than chains or manacles.'

Penny Cyclopædia.

Sir William Gull on Insanity.

Sir William Gull says that the study of insanity is part of the study of vital dynamics, which is familiar to physicians. The lawyer, and the ordinary observer, say 'the man is mad' because he has committed an act of overt insanity—a crime, perhaps; but it often happens that in diseases of the brain—in insanity, as in other diseases,—the crime is only an indication of the sudden stress which has been laid upon a weak and diseased organ which has long been suffering from latent disease. When medical men are called upon to state their grounds for believing that insanity exists in any given case of crime they are commonly expected to produce evidence that the disease had previously manifested itself. It is when the stress is laid upon the weak organ—heart, or brain, or abdominal organ—that it often supplies for the first time evidence of its insufficiency or of its disease. This is the every-day experience of physicians in such coarse forms of organic disease as mitral disease of the heart, or even some forms of peritonitis. It is the frequent experience of physicians also in cases of insanity. It is sometimes said, when insanity is discovered as the cause of crime, that it could not have existed because it did not show itself before; it would be more just frequently in such cases to admit that it did exist because it has shown itself. It was sometimes said that an ignorant man was as good a judge of insanity as the most experienced physician, but physicians—at least, life-long students of men—could not admit this.

We may here observe that the hop-pillow was formerly a popular application to produce sleep, one of the most active ingredients of the hop being its narcotic essential oil, which gives the flower its peculiar smell. The hop-pillow was much employed by George III., and, doubtless, often relieved the sufferings of the sleepless monarch.

Things not generally known, 1st Series.

Lunacy and Thinking.

There is no nation where madness is so rare as in Turkey, where the people, of all others, think the least. In France, Germany, and England—countries more distinguished for intellectual activity—the number of suicides is greater than in any other countries.

Medical Times and Gazette.

Wander Madness.

Although our authorities on insanity do not, we believe, describe any special form of the disease to which they give the above name, it is well known that a strong disposition to wander from home and friends does sometimes occur at the commencement of an attack of mental derangement.

Idiocy Produced by Strong Mental Emotions.

Dr. Abercrombie, in his celebrated work on the 'Intellectual Powers,' gives some very striking examples of this kind. He remarks that 'idiocy is a simple torpor of the faculties, in the higher degrees amounting to total insensibility to every impression; and some remarkable facts are connected with the manner in which it arises without bodily disease. A man, mentioned by Pinel, was so violently affected by some losses in trade, that he was deprived, almost instantly, of his mental faculties. He did not notice anything, not even expressing a desire for food, but merely taking it when it was put into his mouth. A servant dressed him in the morning, and conducted him to a seat in his parlour, where he remained the whole day with his body bent forward, and his eyes fixed on the floor. In this state he continued nearly five years, and then recovered completely, rather suddenly. The account which he afterwards gave of his condition during this period, was that his mind was entirely lost, and it was only about two months before his final recovery, that he began to have sensations and thoughts of any kind. These at first served only to convey fears and apprehensions, especially in the night-time. Of

mental derangement produced in the same way by a moral cause, an affecting example is also given by Pinel. Two young men, brothers, were carried off by the conscription; in the first action in which they were engaged, one of them was shot dead by the side of the other. The survivor was instantly struck with idiocy. He was taken home to his father's house, where another was so affected by the sight of him, that he was seized at once in the same manner, and in this melancholy state they were both received into the Bicêtre (a French Hospital for Lunatics, &c.) For the production of such an extraordinary result, it is not necessary that the mental impression should be of a painful description. Pinel mentions an engineer, who, on receiving a flattering letter from Robespierre respecting an improvement he had proposed in the construction of cannon, was struck motionless on the spot, and soon after conveyed to the Bicêtre in a state of idiocy.'

Horrors of Old Bethlem.

Dr. Conolly, in his able work on 'The Treatment of the Insane without Mechanical Restraints,' states that in the women's galleries, in Bethlem, the House of Commons Committee, in 1815, found in one of the side rooms about ten patients, each chained by one arm or leg to the wall, the chain allowing them merely to stand up by the bench or form fixed to the wall, or to sit down on it.' For a dress, each had only a sort of blanket-gown made like a dressing-gown, but with nothing to fasten it round the body. The feet were without shoes or stockings. Some of these patients were lost in imbecility, dirty, and offensive; associated with them were others capable of coherent conversation, and sensible and accomplished. Many women were locked up in their cells, chained, without clothing, and with only one blanket for a covering. In the men's wing, six patients in the side room were chained close to the wall, five were handcuffed, and one was locked to the wall by the right arm, as well as by the right leg.

In the last century, 'Bedlam' used to be one of the public sights, to which holiday-keepers, on the payment of two-pence,

were attracted to watch the piteous objects caged and confined within their filthy dens. They went in much the same spirit as they visited the lions in the Tower, and we question whether the human creatures were not considered the more dangerous of the two. The treatment of the lunatics in Bedlam, at that time, was rather a favourable specimen of what was considered to be the best method of curing the mentally afflicted. It makes one shudder to read the accounts of this place in the beginning of the century. When Mr. Waterton and Mr. Calvert visited its wards in 1808, they found ten patients in the female gallery, each fastened by one leg or arm to the wall, with chains so arranged that they were able to stand up at a bench; they were dressed each in a filthy blanket, thrown poncho-like over their otherwise naked bodies. This was, moreover, only an ordinary derangement. When any patient was looked upon as dangerous, special arrangements were made that were still more outrageous.

Edinburgh Review, No. 278.

Except the blanket-gown, these men had no clothing; the room had the appearance of a dog-kennel. Chains were universally substituted for the strait-waistcoat. Those who were not cleanly, and all who were disinclined to get up, were allowed to lie in bed—in what state may be imagined.

In one cell they found a patient, whose condition is represented in a plate in Esquirol's work, not much to the honour of English treatment. This patient's name was Norris. He had been a powerful and violent man. Having on one occasion resented what he considered some improper treatment by his keeper, he was fastened by a long chain, which was ingeniously passed through a wall into the next room, where the victorious keeper, out of the patient's reach, could drag the unfortunate man close to the wall whenever he pleased. To prevent this sort of outrage, poor Norris muffled the chain with straw; but the savage inclinations of the keeper were either checked by no superintending eye, or the officers of the asylum partook of his cruelty and his fears; for now a new and refined torture for the patient was invented in the shape of an ingenious apparatus of iron. A stout iron ring was

riveted round his neck, from which a short chain passed to a ring made to slide upwards or downwards on an upright massive iron bar, more than six feet high, inserted into the wall. Round his body a strong iron bar, about two inches wide, was riveted: on each side of the bar was a circular projection, which, being fastened to and enclosing each of his arms, pinioned them close to his sides. The effect of this apparatus was, that the patient could indeed raise himself up so as to stand against the wall, but could not stir one foot from it, could not walk one step, and could not even lie down except on his back: and in this thraldom he had lived for twelve years. During much of that time he is reported to have been rational in his conversation. But for him, in all these twelve years, there had been no variety of any kind, no refreshing change, no relief, no fresh air, no exercise, no sight of fields or gardens, or earth, or heaven.

Alleged Influence of the Moon on the Insane.

Dr. Forbes Winslow, in his attractive work on 'Light: its Influence on Life and Health,' quotes several old writers who maintain, and some of the facts that may have given a colour of truth to, the long-accepted theory that insane persons were directly affected by the lunar beam, and 'liable to periods of lucidity or mental repose, caused by the various phases of the moon.' Towards the conclusion of his argument, Dr. Winslow observes: 'It is impossible altogether to ignore the evidence of such men as Pinel, Daquin, Guislain, and others, yet the experience of modern psychological physicians is to a great degree opposed to the deductions of these eminent men. Is it not probable that there is some degree of truth on both sides of the question: in other words, that the alleged changes observed among the insane at certain phases of the moon may arise, not from the direct, but the indirect, influence of the planet? It is well known that certain important and easily recognisable meteorological phenomena result from the varied positions of the moon; that the rarity of the air, the electric conditions of the atmosphere, the degree of heat, dryness,

moisture, and amount of wind prevailing, are all more or less modified by the state of the moon. In the generality of bodily diseases, what obvious changes are observed to accompany the meteorological conditions referred to? Surely those suffering from diseases of the brain and nervous system affecting the mind cannot, with any show of reason, be considered as exempt from the operation of agencies that are universally admitted to affect patients afflicted with other maladies. That the insane do appear to a degree unusually agitated at the full of the moon, particularly if its bright light is permitted uninterruptedly to enter the room where they sleep, there cannot be a doubt. This phenomena may, I think, be accounted for apart altogether from the hypothesis of there being anything specific in the composition of the lunar ray.' Dr. Winslow adds, in a note, 'An intelligent lady, who occupied for about five years the position of matron in my establishment for insane ladies has remarked that she invariably observed a great agitation among the patients when the moon was at its full.' 'Such,' he adds, 'has been the prevalence of this opinion, that when patients were brought in former times to Bethlem Hospital, especially from the country, their friends have generally stated them to be worse at some particular change in the moon, and of the necessity they were under, at those times, of having recourse to coercion. Some of these patients after recovering, have stated that the overseer or master of the workhouse himself has frequently been so much under the dominion of this planet, that, without waiting for any display of increased turbulence on the part of the lunatics, he has barbarously bound, chained, flogged, and deprived them of food, according as he discovered the moon's age by the almanac.'

Camphor and Insanity.

Sweet odours, in certain circumstances, produce narcotic effects. That camphor is capable of doing so in a high degree, is shown by what is recorded to have taken place in Canada, West. The 'Toronto Colonist' says: 'We are informed that eight persons have been admitted into the lunatic asylum in a

state of insanity, occasioned by consuming quantities of camphor to prevent cholera. Some of them carried it about in their pockets, and kept from time to time eating small quantities of it. Others took it dissolved in brandy. In all cases where it was taken in any quantity, it produced insanity. It is a fact well known, that a comparatively small quantity of camphor will set a dog mad, and that he will soon afterwards die.'

Johnston's Chemistry.

Insanity in Cities.

We learn that the proportion of insane to sane persons in America is one in every 262; in Scotland it is one in every 574; in the agricultural districts of England it is one in 820; in London the proportion is one in 400. We see thus that insanity is more prevalent in cities, and less so in the country, evidently due to the greater strain made on the mental faculties in cities, and to the fact that mental activity is there also allowed a greater scope. Political liberty, singularly enough, has some hand in this matter; for in countries under a despotic government insanity is rare, as in Turkey, China, and Russia. Dr. Brigham affirms also that it is, or rather was, uncommon in Spain, out of the large cities; it will be a curious physiological inquiry to discover whether the recent Spanish Revolution has increased, or will decrease, the tables of insanity.

Treatment of Lunatics.

'Nothing is more extraordinary in medical history,' says Dr. Conolly, 'than the fact that the Greek physicians have been imitated in the treatment of lunatics down almost to the present day. The prescriptions of Celsus, of force to subdue the ferocity and the violence of lunatics, had been followed nearly to the end of the last century. Hoffman, the most voluminous writer among the physicians of the last century, showed what the practice throughout his time was. The patient was to be dealt with quietly when he was passive, and when he was violent he was to be scolded and beaten. Dr.

Corry, in the same period, laid it down that fear was the principle to proceed upon in treating the insane, that the readiest method of producing fear was punishment, and that the readiest punishment was stripes. Stripes, however, were but one form, and the slightest, of cruelty; in the old asylums the most terrible engines of torture to carry out the theory of punishment were resorted to. The inventions to give pain were marvellous. There were chairs of restraint, in which the patient could not move limb nor body; and whirling chairs, in which the unfortunate lunatic was whirled round at the rate of a hundred gyrations a minute. The foreign physicians, and in particular the Germans, went even further, and contemplated tortures by forcing illusions; for instance, suggesting a means of drawing the lunatic up to the top of a high tower, and plunging him down suddenly, as he would suppose, to a deep cavern, which was to be all the better if it could be fitted with serpents; and again expatiating upon the advantage to be derived from walking a patient across a room, and making him suddenly tumble into a cistern in which he would be nearly drowned. These dreadful things had continued until after 1790. . . . In the asylums the lunatics were kept in a state of partial famine, chained, covered with filth, but half clothed, and those insufficient clothes seldom changed. Cages of iron were in use, in which some of the lunatics were kept for years and years; and all these miseries were inflicted, not from carelessness, but from what was believed to be real humanity.'

Even at a somewhat later period, when absolute torture had given way, in asylums supposed to be well managed, to what was called 'restraint,' the effects of this restraint were, in fact, refinements of cruelty. Dr. Conolly tells us:—

'The spectacle when the strait-waistcoat was determined upon was most distressing. There was a violent struggle; the patient was overcome by main force; the limbs were secured by the attendants with a tightness proportioned to the difficulty they had encountered, and the patient was left heated, irritated, mortified, and probably bruised and hurt, without one consoling word; left to scream, to shout, to execrate, and apparently to exhaust the whole soul in bitter and hateful expressions, and in

curses too horrible for human ears. It was impossible to view these things almost daily occurring without resolving to endeavour to prevent them.'

The credit of having first suggested non-restraint belongs to Pinel, who, supported by Couthon, removed in 1793 the chains of 53 lunatics in the Bicêtre. In 1792, under the superintendence of William Tuke, the Retreat, near York, was established by the Society of Friends, and was conducted on humane and enlightened principles. In 1819, and for a few years afterwards, the asylum at Aversa, near Naples, which has since fallen off most deplorably, contained nearly 500 patients, of whom not more than four or five were under restraint, and of whom the majority were suffered to exercise and amuse themselves with the utmost freedom. They even had a theatre, in which a company of insane actors performed before an audience of lunatics. Still later, by Dr. Charlesworth and Dr. Gardiner Hill, restraints were laid aside at Lincoln.

Dr. Conolly assumed the control of Hanwell in 1839. By tongue and pen, he laboured without ceasing in defence of the great principles which he laid down, and he saw these principles acknowledged, and the practice founded upon them more or less closely copied, in every asylum in England, and in many in all parts of Europe. He found the lunatic an object of dread and superstitious horror; he left him an object of commiseration and kindness. He found insanity regarded as a disease of the mind; he left it recognised as a disease of the body. He found a mad-house a prison without hope, and a place of torture without mercy; he left it a hospital for many, and, in fact as well as in name, an asylum for all.

Mad Poets.

Christopher Smart, who, after a brilliant career at Cambridge, translated the Psalms, Phædrus, and Horace into prose, and published a collection of poems, through pecuniary embarrassments and other mortifications, became deranged, and continued in this condition, with intervals of sanity, till his death in 1770, in the rules of the King's Bench. During his confine-

ment he wrote, by means of a key, on the panels of his chamber, a poem of nearly a hundred stanzas to the 'Glory of David, King and Prophet.' Here is one of his verses—

He sang of God—the mighty source
Of all things—the stupendous force
  On which all strength depends;
From whose right arm, beneath whose eyes
All period, power, and enterprise
  Commences, reigns, and ends.

. . . . . .

Glorious the sun in mid career;
Glorious the assembled fires appear;
  Glorious the comet's train;
Glorious the trumpet and alarm;
Glorious the Almighty's stretched-out arm;
  Glorious the enraptured main.

Glorious—more glorious is the crown
Of Him that brought salvation down
  By meekness, call'd Thy Son;
Thou that stupendous truth believed,
And now the matchless deed's achieved,
  Determined, dared, and done.

Here are a few lines of a poem by one Thomas Lloyd, who passed most of his life in a mad-house; for, though he was several times set at liberty, it was always necessary in a short time to put him under restraint again.

When disappointment gnaws the bleeding heart;
And mad resentment hurls her venom'd dart;
When angry noise, disgust, and uproar rude,
Damnation urge and every hope exclude;
These, dreadful though they are, can't quite repel
The aspiring mind that bids the man excel.

. . . . . .

To brighter mansions let us hope to pass,
And all our pains and torments end. Alas!
That fearful bourne we seldom wish to try,
We hate to live, and still we fear to die.

. . . . . .

Methinks that still I see a brighter ray,
That bids me live, to see a happier day,
And when my sorrows, and my grief-worn spirit flies,
My Maker tells me—fear not Lloyd—it never dies.
This cheering hope has long supported me,
I live in hope much happier days to see.

John Clare, the peasant poet of Northamptonshire, who was so remarkable when insane for the tenacity and accuracy of his memory, could depict with an accuracy extending to the minutest particulars, and in so graphical a manner as to excite admiration, the execution of Charles I., of which he professed to have been an eye witness. In the same way he would give, with wonderful exactness in the nautical terms, an account of the Battle of the Nile, and of the death of Nelson, maintaining that he was one of the sailors present at the action; yet he had never seen the sea in his life.

Youth Melancholy.

The keen susceptibility to pleasure and joy implies a keen susceptibility to pain. There is, probably, no time of life at which pains are more intensely felt; no time at which the whole man more 'groaneth and travaileth in pain together.' Young men are prone to extreme melancholy, even to disgust with life. A young preacher will preach upon afflictions much more than an old one. A young poet will write more sadly. A young philosopher will moralize more gloomily. And this seems unreal sentiment, and is smiled at in after years. But it is real at the time; and perhaps is nearer the truth at all times than the contentedness of those who ridicule it. Youth, in fact, feels everything more keenly; and as far as the keenness of feeling contributes to its truth, the feeling, whether it is pain or pleasure, is so much the truer. But in after life, it is the happiness, not the suffering of youth, that most often returns to the memory, and seems to gild all the past.

The Education of the World, by Bishop Temple.

Anger and Madness.

There is no difference between anger and madness but continuance, for raging anger is a short madness. What else argues the shaking of the hands and lips, paleness or redness, or swelling of the face, glaring of the eyes, stammering of the tongue, stamping with the feet, unsteady motions of the whole body, rash actions which we remember not to have done, distracted and wild speeches? And madness, again, is nothing but a continued rage; yea, some madness rageth not: such mild madness is more tolerable than frequent and furious anger. *Bishop Hall.*

SUICIDE, AND ITS CAUSES.

It is difficult to reconcile with our knowledge of the instincts of human nature the fact that a person can deliberately commit an act of self-destruction. There is no feeling so strongly implanted in us as the love of life. It is an instinct of nature to strive to preserve our being, and an instinct cannot easily be eradicated. One of our poets, in alluding to this subject, after declaring life to be the dream of a shadow, 'a weak-built isthmus between two extremities, so frail that it can neither sustain wind nor wave,' yet avows his preference for a few days', nay, a few hours' longer residence upon earth, to all fame which wealth and honour could bestow—

> Fain would I see that prodigal
> Who his to-morrow would bestow,
> From all old Homer's life, e'er since he died, till now !

'Is there anything on earth I can do for you?' said Taylor to Dr. Wolcot, as he lay on his death-bed. The passion for life dictated the answer: 'Give me back my youth.' These were the last words of the satirical buffoon. It is related of one of the favourite Marshals of Napoleon, the Duc de Montebello, which finely illustrates the strength of this instinctive principle, that during a battle in the south of Germany, the Duke was struck by a cannon ball, and so severely wounded, that there was no hope of a respite. Summoning the surgeon, he ordered his wounds to be dressed, and when help was declared to be unavailing, the dying officer, excited into a frenzy by the love of life, burned with vindictive anger against the medical attendant, threatening the heaviest penalties if his art should bring no relief. The dying Marshal demanded

that Napoleon should be sent for, as one who had power to save; whose words would stop the effusion of blood from the wound, and awe nature itself into submission. Napoleon arrived just in time to witness the last fearful struggle of expiring nature, and to hear his favourite Marshal vociferate, as the lamp of life was just being extinguished, 'Save me, Napoleon!'

It is recorded of Louis XI. of France, that so desperately did he cling to life, when everything warned him to prepare for death, that he, in accordance with the barbarous physiology of that age, had the veins of children opened, and greedily drank their blood, hoping, in this way, to fan the dying embers of life into a flame.

With respect to the cause of suicide, it is difficult to detect, in the majority of cases, with much accuracy, the circumstances which have operated in producing the disposition to commit 'the rash act.' The cerebral disease may be, and often is, only a secondary affection, the primary cause being a physical disease, situated at some distance from the sentient organ.

Of 6,782 cases of suicide examined carefully by M. Falleraye, detailed in the records of the police, the following is the analysis :—

Disappointed love	254
Jealousy	92
Humiliated self-love	53
Grief	120
Remorse for misdeeds	49
Blighted ambition	122
Reverse of fortune	322
Gambling	155
General bad conduct	1,287
Domestic chagrin	728
Misery	905
Misanthropy	3

The causes of the remaining numbers were not ascertained.

Dr. Young, in his 'Night Thoughts,' speaks of 'Britain, in-

famous for suicides;' and, judging from a recent comparison in a French Statistical Journal, we still maintain a very unsatisfactory position as regards some other European States. The ratio of suicides per million of the respective populations in 1864 was 110 in France, 64 in England, 45 in Belgium, 30 in Italy, and 15 in Spain.

Dr. Schlegel traces the disposition to commit suicide among the English, Germans, and Russians, to intemperance, in France to love and gambling, and in Spain to bigotry. A curious fact is mentioned by an authority in the 'North American Review'—that in the week which followed the drawing of the last lottery in England 50 suicides were committed.

A frequent cause of suicide is a perversion of the natural instinct of imitation. In some persons we witness an irresistible propensity to imitate others. Tissot relates the singular case of a female, in whom the faculty of imitation was so strongly developed, she could not avoid doing everything she saw others do. The commission of a great and extraordinary crime to this day produces not unfrequently a kind of mania of imitation in the district in which it happened. Religious incidents have constantly been known to occasion similar events; and what is remarkable is, that the scene or place of the first event seems to favour its repetition by other persons approaching it. Thus, a supposed miracle having been performed before a particular gate in Paris, such a number of similar occurrences happened on the same spot in a few days, that the police posted a peremptory notice on the gate 'prohibiting any individual from working miracles on the place in question.' This had the desired effect, and miracles ceased to be performed. Some years back a veteran hung himself at the Hotel des Invalides on the threshold of one of the doors of a corridor. No suicide had occurred in the establishment for two years previously; but in the succeeding fortnight five individuals hung themselves on the same cross-bar, and the governor was obliged to shut up the passage.

M. Falret has stated several extraordinary facts which prove incontestably that suicide has prevailed epidemically, particu-

larly in time of great public distress, and when the constitution of the air has been very hot and moist. In 1813, in the small village of St. Pierre Nonjou, in the Valais, one woman hung herself, and many others followed her example, when the civil authorities adopted means of preventing the contagion from spreading. At one period, at Lyons, the women were seized with a propensity to commit suicide by throwing themselves into the wells of the city; this desire raged epidemically. A gentleman informed Dr. Burrows that when he was at Malta, a few years after the island was taken by the British, suicide became so alarmingly common that every means were tried to put a stop to it, but nothing succeeded till the commandant resolved to deny the bodies of suicides Christian burial, and to treat them with every indignity. This had the desired effect.

That the disposition to commit suicide may be hereditary is a point about which there cannot be a doubt. M. Falret gives a striking instance of this. A young man committed suicide at Paris, and his brother was sent for from the country to attend his funeral. At seeing the body he was seized with great agitation, and exclaimed, with melancholy foreboding, 'Alas! my poor father died by his own hand, and now my brother has fallen a victim to the same fate, which awaits me also, as I have been strongly tempted on my way hither to follow their example, and I cannot avoid it.' A similar case is mentioned by Dr. Rush of Philadelphia. The propensity to commit suicide will propagate its own type through succcessive races. Dr. Burrows observes, 'I have had several members of one family under my care, where this propensity to commit suicide declared itself through three generations: in the first, the grandfather hung himself; he left four sons: one hung himself, one cut his throat, and the other drowned himself in a very extraordinary manner, after being some months insane; the fourth died a natural death, which, from his eccentricity and unequal mind, was scarcely to be expected. Two of these sons had large families; one child of the third son died insane; two others drowned themselves; another is now insane, and has made the most determined attempts on his life. Several of

the progeny of this family, being the fourth generation, when arrived at puberty, bore strong marks of the same fatal propensity. None, I believe, of the children of the fourth son of the second generation, who died a natural death, have manifested this predisposition.' If we are right in considering all cases of suicide as the result of a departure from a healthy condition of moral feeling, strictly speaking, as moral insanity, we cannot have much difficulty in assenting to the proposition that the disposition to destroy life may be the effect of hereditary transmission. Pinel relates the case of a father, son, and daughter, who destroyed themselves by their own hands. It may be said that this is only the result of imitation. It could not have been so in the first instance, for the grandfather of the children had also been guilty of suicide, which fact had been, for certain purposes, concealed from his son, and who, therefore, was not exposed to the powerful influence of the imitative principle. There are now many facts on record in support of this view of the subject.

The *tædium vitæ*, or *ennui*, which is so often the cause of suicide among our friends across the channel, is only to be subdued by moral treatment. Imagined distress is often relieved by the person being subjected to the real ills of life. It is, indeed, difficult to restore enjoyment to the man who has quite exhausted it. Here the advice which Fenelon gives to Dionysius, the tyrant, by the mouth of Diogenes, will naturally apply :—'To restore his appetite he must be made to feel hunger ; and to make his splendid palace tolerable to him, he must be put into my tub, which is at present empty.'.

Dr. Forbes Winslow on Suicide.

French and English Suicides.

'Will you dine with me to-day?' said a Frenchman to a friend. 'With the greatest pleasure: yet, now I think of it, I am particularly engaged to shoot myself; one cannot get off such an engagement.' This is not the suicide *à-la-mode* with us. We ape at no such extra refinement or civilization. We can be romantic without blowing out our brains. English

lovers, when the course of true love is interrupted, do not retire to some secluded spot, and rush into the next world by a brace of pistols tied up with cherry-coloured ribands. When we do shoot ourselves, it is done with true English gravity—it is no joke with us. We have no inherent predilection for the act; no 'hereditary imperfection in the nervous juices' (as Montesquieu, with all the impudence of a philosopher, gravely asserts) forcing us to commit suicide.

But to be serious. Dr. Schlegel has dwelt at much length on the abandoned state of the inhabitants of the French metropolis; and after giving us some most important statistical details respecting the number of suicides committed there, and the causes which led to them, he alludes to the gross immorality of the people, and concludes by denouncing the Parisian capital as 'a suffocating, boiling caldron, in which, as in the stew of Macbeth's witches, there simmer, with a modicum of virtue, all kinds of passions, vices, and crimes.'

The English, then, are not, *par excellence*, a suicidal people. When the inhabitants of a country are industrious and prudent the crime of self-destruction will be rare. Out of 120,000 persons who insured their lives in the London Equitable Insurance Company, the number of suicides, in 20 years, was only 15. The Irish are said to be the least disposed, of all nations in the world, to commit suicide. Dublin and Naples are the two cities in which fewest suicides occur; yet in both the poorer classes are poor indeed. Dr. Graves observes that an Irishman often murders his neighbour, but he has too high a sense of propriety to think of killing himself. The fact is, that the prevalence of murder prevents the necessity for suicide.

The popular notion that more suicides are committed in the month of November than at any other period of the year is founded on erroneous data. Taking the average number of suicides in each month, from the years 1817 to 1826, it was as follows:—

January	213
February	218
March	275

April	374
May	328
June	336
July	301
August	296
September	246
October	198
November	131
December	217
	3,133

It has been clearly established that in all the European capitals, when anything like correct data can be obtained, the *maximum* of suicide is in the months of June and July; the *minimum* in October and November. It appears from this that the disposition has most to do with high temperature; for it has been proved that, when the thermometer of Fahrenheit ranges from 80 degrees to 90 degrees, suicide becomes more prevalent.

With reference to the mode of terminating life, it is said by competent authorities that in early life death by hanging is preferred; in middle life fire-arms become fashionable; and that, in more advanced years, the rope again is in vogue. Suicide is less frequent among females than males.

History has been denounced as an old almanack; but from its pages many instructive lessons may be learned. During the French revolution suicides in that country reached to an enormous extent. Is there anything to surprise us in this fact? It is notorious that in despotic countries madness and suicide are extremely rare. Not that this is a legitimate argument in favour of despotism, but it demonstrates to us the folly of uselessly exciting the passions of the human mind, and that it is the first duty of a good citizen and government to endeavour to elevate the moral character of a nation by sound religious education, and to inculcate peace, charity, and good-will to all.

Dr. Forbes Winslow on Suicide.

PHENOMENA OF DEATH.

The Law of Mortality.

To medical science Death appears as inevitable as growth; and, as the child is developed from the boy, and grows to the man, so, in his turn, as certainly retrogrades to senility and death. We may assume that we are born with the seeds of death, and that death is as natural to man as his growth and development. Mr. Alfred Smee, the well-known surgeon, tells us that he has watched with intensity of feeling his aged patients passing without disease from manhood to death; and whilst as the result of his observations, it is merely accidental whether the retrogression takes place more rapidly in one organ than another, it is clear that death itself is not an accidental but a normal result, neither to be averted by medicine, nor parried by the mode of life. Viewing age in this life, the physician must not expect much from his skill, when he attempts to ward off a result which we are designed from birth to suffer. Nevertheless, health may be secured and life prolonged by care and the strictest attention to physical laws.

The condition of health should be rigorously followed. All external agencies, especially heat, should be duly regulated, and the diet should be most carefully adjusted to the power of digestion, and the requisite amount. When age, unaccompanied with disease, sets in, the appetite gradually and increasingly fails, nutrition and assimilation gradually lessen; and the capacity to generate force and heat diminishes. At last, nervous power fails, and the patient silently passes into the sleep of death. To this end man is born, and must submit; for, as sure as the endogenous tree grows itself to death, so does

man, by virtue of some changes in his organisation, cease to evince the powers of health, and finally of life.

Smee on General Debility and Defective Nutrition.

That when a Man's Time is come he must die.

If particular, absolute, unconditional predestination be true, and a man's fate is irreversibly fixed, before the foundation of the world, God has created medicines and the physician in vain. And according to this doctrine, a rope need not be thrown to a sailor fallen overboard in a storm in the middle of the vast Atlantic, for he will swim a few thousand miles to shore, agreeable to the decree, if, as the proverb has it, he was born to be hanged.

Jones's Medical Vulgar Errors Refuted.

Criterion of Death.

Physiologists were long at variance as to any certain test of the event of death, or, in other words, no recognised distinction existed between the human body immediately before and immediately after death; until, in 1839, it was communicated to the French Academy, that the blood taken from the body after death is distinguished from the blood before death by its being non-coagulable.

Faculty of Feigning Death.

There are cases on record of persons who could fall spontaneously into death-trance. Monti, in a letter to Haller, mentions several. A priest of the name of Cælius Rhodaginus had the same faculty. But the most celebrated instance is that of Colonel Townshend, mentioned in the surgical works of Gooch; by whom and by Doctor Cheyne and Doctor Beynard, and by Mr. Shrine, an apothecary, the performance of Colonel Townshend was seen and attested. They had long attended him, for he was an habitual invalid, and he had often invited them to witness the phenomenon of his dying and coming to life again; but they had hitherto refused from fear of the consequences to

himself. Accordingly, in their presence, Colonel Townshend laid himself down on his back, and Dr. Cheyne undertook to observe the pulse; Dr. Beynard laid his hand on his heart; and Mr. Shrine had a looking-glass to hold to his mouth. After a few seconds, pulse, breathing, and the action of the heart were no longer to be observed. Each of the witnesses satisfied himself on the entire cessation of these phenomena. When the death-trance had lasted half an hour, the doctors began to fear that their patient had pushed the experiment too far, and was dead in earnest; and they were preparing to leave the house, when a slight movement of the body attracted their attention. They renewed the routine of their observation; when the pulse and sensible motion of the heart gradually returned, and breathing and consciousness. The sequel of the tale is strange: Colonel Townshend, on recovering, sent for his attorney, made his will, and died, for good and all, in six hours afterwards.—

Phantasmata, by R. R. Madden.

Phenomena of the Death-Bed.

Whatever be the causes of dissolution, whether sudden violence or lingering malady, the immediate modes by which death is brought about appear to be but two. In the one, the nervous system is primarily attacked, and there is a sinking, sometimes an instantaneous extinction, of the powers of life; in the other, dissolution is effected by the circulation of black venous blood instead of the red arterial blood. The former is termed death by syncope, or fainting; the latter, death by asphyxia. In the last-mentioned manner of death, when it is the result of disease, the struggle is long, protracted, and accompanied by all the visible marks of agony which the imagination associates with the closing scene of life—the pinched and pallid features, the cold clammy skin, the upturned eye, and the heaving, laborious, rattling respiration. Death does not strike all the organs of the body at the same time: some may be said to survive others; and the lungs are the last to give up the performance of their function, and die. As death approaches, they become gradually more and more oppressed;

the air-cells are loaded with an increased quantity of the fluid which naturally lubricates their surfaces; the atmosphere can now no longer come into contact with the minute blood-vessels spread over the air-cells, without first permeating this viscous fluid—hence the rattle; nor is the contact sufficiently perfect to change the black venous into the red arterial blood: an unprepared fluid consequently issues from the lungs into the heart, and is thence transmitted to every other organ of the body. The brain receives it, and its energies appear to be lulled thereby into sleep—generally tranquil sleep—filled with dreams which impel the dying lip to murmur out the names of friends, and the occupations and recollections of past life.

Sir Henry Halford.

'Bring me back the same face!' Simple expressions these would seem to be, quoted by Lavater, uttered by some simple and sensitive German parent, as his early request, when taking leave of his son, who, in the morning of life, is quitting a quiet home of affection for all that awaits him in the wide world. But the simple words dwell with us, and we perceive that there is a deep meaning in them. Passions, good or bad; and trials and struggles; and pain and sorrow; and Time—will all write their peculiar characters on that youthful, candid face; characters which death alone, with its effacing fingers, will take away; nay, which will still for a brief period survive, and dignify or mar the immovable face of death itself. This strange writing on the human face soon begins, and it goes on as long as intellectual and moral life lasts.

Dr. Connolly on the Physiognomy of Insanity.

The Beauty of Death.

To those exquisite lines in the 'Giaour,' in the context of which the aspect of Greece is compared to a beautiful corpse, Lord Byron appends a note, in which he remarks, that 'this peculiar beauty remains but a few hours after death.' But Mr. Leslie, the painter, was told by those in the habit of making casts, that on the second day the expression is generally

improved, and even on the third day it is often still finer. The Beauty of Death is not easily explicable. How far the strange fascination may arise from the idea suggested of a repose compared with which that of the most tranquil sleep is agitation, we do not pretend to determine. Mr. Leslie knew a man of the highest order of mind, a man of fine feelings, but of great simplicity, and far above all affectation, who, standing by the corpse of his wife, said, 'It gives me very pleasurable sensations!' And yet he truly loved her.

Death from Joy.

In the reign of Queen Mary, there was a gentleman of Shropshire, Edward Burton, of Longnor, who was strongly attached to the Reformed doctrine. He was an aged man, but his feelings were alive to the miseries of his country and the afflictions of the Church. The reports of the Queen's illness had reached his residence near Shrewsbury, when, one morning, the bells of St. Chad's were heard to ring merrily, and he thought these sounds might announce the accession of Elizabeth to the throne. His son undertook to go and learn the news; and as the road by which he would return passed in front of the house on the opposite side of the river, to reach the bridge below, it was agreed that if the surmise should prove true, he should wave his handkerchief as he passed, to signify it to his father. The old man watched for his return, and saw the signal: it told of restored peace and liberty, not to himself only, but to his country and his religion; and he went into his house, breathed his *Nunc dimittis*, and laid him down and died.

Massingberd's English Reformation.

The Signs of Death.

In the 'Quarterly Review' appears this paper on the works of M. Julia de Fontenelle, J. A. Symonds, M.D., and F. Magendie, on the 'Signs of Death.' Observation has shown that in countries boasting of a highly advanced civilisation death from pure

old age rarely appears; as even in those who live the longest some vulnerable point becomes developed, and disease hastens the termination of life. But occasionally age alone causes the scene to close. The nature of the process by which this is achieved is approximately indicated as we advance in life. The organs become impaired, the sight dim, the hearing dull, the touch obtuse. Indolence becomes natural to the old; with enfeebled strength, bones brittle, ligaments rigid, and muscles weak, activity becomes impossible. The celebrated Lord Chesterfield, in his decrepitude, and unable to bear rapid motion in a carriage, said, when about to take an airing at a snail's pace, 'I am now going to the rehearsal of my funeral;' an expression showing that the mind had not shared in the decay of his body. Yet this retention of mental faculty is but partial. In the celebrated Fontenelle (not M. Julia de Fontenelle above mentioned), his memory was impaired but his wit remained. He marked and could jest on his infirmities. 'I am,' he remarked, 'about to decamp; some faculties have left me, and I have sent my baggage on before.' It is also recorded of him that when near the age of 100, a lady of nearly equal age said gaily, 'Monsieur, I believe that death has forgotten us.' 'Hush, madame,' said the venerable wit, 'don't talk so loud, or you may arouse his attention.' It is cheering to think that death is not to the patient the melancholy quarter of an hour which many imagined, for we generally die by piecemeal, and, frightful as this sounds, it is the gentlest form. The organs degenerate without pain, and dwindling together, preserve their harmony. De Moivre, the master of calculation, spent, at 80, twenty hours of the twenty-four in sleep, until he fell asleep and woke no more. The presentiment of death is strong with some. Ozanam, the mathematician, while in apparent health, rejected pupils, in the belief of his coming death, and he speedily died of an apopletic stroke. Flechier, the divine, had a dream foreboding his dissolution, and he forthwith ordered the erection of his tomb, which had scarcely been finished when he became its occupant. Mozart's 'Requiem,' and Hogarth's picture of 'The End of All Things,' were both executed by the artists in the belief that the number of their days was nearly filled, and the

event appeared to countenance the foreboding. Louisa of Savoy, the mother of Francis I., when in a fever, saw, or thought she saw, a comet; 'Ha!' she exclaimed, 'there is an omen which appears not for persons of low degree. God sends for us great; shut the window, it announces my death. I must prepare.' Her physician in vain assured her that she was not in a dying state. She died in three days, the victim of a fright produced by pride and ignorance.

Many traits are frequent in the dying-hour, which are far from usual. Some, when sinking, toss the bed-clothes from their chests, which indicates that they feel the covering oppressive. Others pick the sheets or work them between their fingers, which may be done to excite by friction the benumbed sense of touch. When the sensibility to outer impressions is lost, the dying often dream of their habitual occupations, and construct an imaginary present from the past. Doctor Armstrong departed, delivering medical precepts. Napoleon fought some battles over again, and his last words were '*tête d'armée.*' Lord Tenterden, who passed straight from the judgment seat to his death-bed, fancied himself presiding at a trial, and expired with '*Gentlemen of the Jury, you will now consider your verdict.*' Dr. Adam, the author of 'Roman Antiquities,' imagined himself in school, distributing praise and censure to his pupils; '*But it grows dark,*' he said, '*the boys may dismiss,*' and instantly died. Thus each believed himself engaged in the business of life, when life itself was departing.

A species of delirium resembling drunkenness is sometimes seen in the dying; consciousness remains, but not self-control. A woman who had conceived an appetite for scandal, combined with extreme caution in retailing it, poured out a flood of venom and malice before she died. Her habitually low and mysterious tones grew noisy and emphatic, hints gave place to broad assertions, and each sentence carried a tail and a sting. 'I verily believe,' said her husband, 'that she repeated in that single day every word she had heard against anybody from the time she was a child.'

Sometimes a fatal malady appears to stop, and friends congratulate the patient on his recovery. But it is death come

under a mask. A son of Doctor Beattie having passed from the delirium of a fever to complete tranquillity, died while his father was congratulating him on his recovery. A victim of hydrophobia—a disease in which every drop of liquid aggravates convulsions—was found by Dr. Latham quietly quaffing off a jug of porter at a draught. The nurse exclaimed, 'What a wonderful cure!' but within an hour the man was dead. Death by brain fever is frequently preceded by a lucid interval. A patient who had passed three days in lunatic violence without sleep became rational, settled his affairs, and conversed about a sister of his lately dead, whom he said he should soon follow, as he did in the course of the night. Sir Henry Halford cautioned his pupils against these appearances, which often deceived physicians themselves. This pause in the disorder is called the lightening before death, and the amendment is not real, unless the pulse be improved. The moment which converts a sensitive body to inanimate matter is often indistinguishable, and many persons, especially women, almost fear to sleep lest they should wake with six feet of earth for their covering, and a coffin for their bed.

Many have written books to aggravate these terrors, and Julia de Fontenelle, who seems to have been a fanatic in the faith that burial alive was frequent, has collected in his work all the hacknied tales by which the timid have for ages been terrified. Roger North mentions that some Englishmen who were riding near Constantinople, escorted by a Janissary, passed an aged and shrivelled Jew, who was sitting on a sepulchre. The Janissary, never doubting but that the Jew was the rightful tenant, ordered him back to his grave, after rating him soundly for stinking the world a second time. If the Turks hear a noise in the tomb, they open it forthwith, and make matters sure by chopping the body to pieces. The Emperor Zenon was said to have been buried when drunk, by order of his ambitious wife; and M. Fontenelle says that for two nights he cried out from his sepulchre, 'Have mercy on me; take me out.' But he called in vain. The Archbishop Geron was also buried alive, and left to his fate, as the persons who heard him shouting from his grave refused to believe him. There was an abbé who

had better luck. He revived on his way to the grave. His attendants were burying his cat with him; but as the abbé employed his returning strength in the endeavour to drive off the cat, which sat like a nightmare on his chest, the animal mewed with pain, whereupon the procession was stopped and the coffin unscrewed.

An extraordinary phenomenon formerly excited the worst apprehensions. Bodies were undoubtedly found turned in their coffins and the grave clothes deranged. But this is now known to be due to the agency of corruption. The development of gas in a corpse, and its mechanical force, frequently mimics the movements of life. Frequently strangers, on seeing the motion of limbs, run to the Morgue in Paris, and announce with horror that the person is alive. All bodies generate gas in the grave, and it constantly twists the bodies, and sometimes bursts the coffin itself. When the gas explodes with a noise, imagination has converted it into a cry or groan. The grave has been re-opened, and the position of the body and the laceration of the flesh have confirmed the suspicion. The ceasing to breathe is, however, the invariable and also the unerring sign that death has taken place. Even the existence of heat in the body indicates no vitality where the breathing has actually ceased. An extraordinary case of this kind some years since was announced in the 'Observer' to have occurred at Bristol.

The pain of dying must be distinguished from the pain of previous disease, for the term 'agonies of death' has led to serious error. Persons dying frequently attest the absence of pain. 'If I had strength enough to hold a pen,' said William Hunter in his last moments, 'I would write how easy and delightful it is to die.' The same sentiment has in other instances been frequently expressed. In another, and a common condition, they are in utter unconsciousness. We have evidence from those whom disease spared at the eleventh hour, that, whilst their supposed sufferings were pitied by their friends, existence was a blank. The delirium of fever is distressing to witness, but the victim awakens from it as from a heavy sleep, totally ignorant that he had passed days and nights tossing wearily and talking wildly. As little is the death-sweat forced

out by anguish. It was in the midst of this that Montaigne, roused by the weeping of his relations, exclaimed, 'Who is it that torments me thus? why was I snatched from my deep and pleasant repose? Oh! of what rest do you deprive me!' Such fond lamentations disturb many a last moment, and the dying often remonstrate by looks when they cannot by words. To be shot dead is one of the easiest modes of terminating life; and, from what is known of the first effects of gun-shot wounds, it is probable that the effect is rather stunning than acute. Lord Byron remarked the physiological peculiarity that the expression in death from gun-shot wounds is invariably that of languor, while in death from a stab the countenance reflects the natural character of gentleness or ferocity to the latest breath. Some cases show with what little disturbance life may go on under fatal wounds, till it suddenly comes to a stop. A foot-soldier at Waterloo, pierced by a musket-ball, begged water from a trooper who chanced to pass with a canteen of beer. The wounded man having drunk, returned his heartiest thanks, stated that his regiment was nearly exterminated, and proceeding a few yards, fell to the earth, and with one convulsive movement expired.

Drowning is also a painless death. A gentleman who had experienced the sensations produced by it, says that he felt not the slightest sense of suffocation. 'The stream was transparent, the day brilliant, and as he stood upright he could see the sun shining through the water, with a dreamy consciousness that his eyes were about to be closed upon it for ever. Yet he neither feared his fate nor wished to avert it. A sleepy sensation, which soothed and gratified him, made a luxurious bed of a watery grave.' A friend informed Motte la Vayer that such was his delight in groping at the bottom, that a feeling of anger arose against the persons who pulled him out. A highly distinguished officer, still living, speaks of the total absence of pain while under the waves; but adds a circumstance of startling interest, namely, that during the few moments of consciousness the events of life from childhood seemed to pass before his eyes with lightning-like rapidity and brightness.

To be frozen to death, so far from being painful, conveys a

species of pleasure. Intense cold induces speedy sleep, which fascinates the senses. The most curious example of this is found in the case of Dr. Solander, who travelled with Captain Cook. The doctor, by birth a Swede, and well acquainted with the effects of a rigorous climate, admonished the company in defiance of lassitude to keep moving on. He spoke like a sage, but he felt like a man. In spite of his own warnings, he was the first to sit down. A black servant, who followed his example, when told he would die, said that was what he desired. The doctor slept for two or three minutes, and he would have slept for ever had not his companions awakened him. In Napoleon's retreat from Moscow, Beaupré, of the Imperial Medical Staff, says, 'The danger of stopping was universally observed and generally disregarded.

It is needless to detail the sensation produced by various modes of execution as practised in different ages and countries. The blushing of Charlotte Corday, when her cheek was struck by the executioner who held up her severed head, is stated by the reviewer to be unattested by any witness. But an attestation thereof is contained in a number of a French surgical magazine, published nearly at the time. And, the possibility was accounted for by the allegation that the severance of the head produces instant death only in the parts of the body beneath the stroke, but that life for a while remains in the parts above it. The slow fire to which religious persecutors subjected their victims, and deaths by crucifixion are admitted painful, but Providence has set bounds to the cruelty of man, and torture carried too far defeats itself. And when every other alleviation is gone, patience under aggravated torments may be attained by the knowledge that there must be a speedy abatement or a speedy release.

Changes in the Body during Life.

Is it not surprising, that an individual who retains every peculiarity of body and of mind, whose features, whose gait and mode of action, whose voice, gestures, and complexion, we are ready to attest as the very proof of personality,—should,

in the course of a few days, change every particle of his solid fabric; that he, whom we suppose we saw, is, so far as his body is concerned, a perfectly different person from him whom we now see? That the fluids may change, we are ready to allow; but that the solids should be thus ever shifting, seems at first improbable. And yet, if there be anything truly established in physiology,—if there be truth in the science at all,—that fact is incontrovertible.

In these revolutions of the living animal substance, the material is alternately arranged, decomposed, and rearranged. The end of this is, that the machinery of the body is ever new, that it possesses a property within itself of mending that which is broken, of throwing off that which was useless, of building up that which was insecure and weak, of repelling disease, or of controlling it, and of substituting that which is healthful for that which is morbid.

This property of the living body to restore itself when deranged, or to heal itself when broken or torn, is an action which so frequently assumes the appearance of reason, as if it were adapting itself to the particular occasion, that Mr. John Hunter speaks of parts of the body as 'conscious of their imperfection,' and 'acting from the stimulus of necessity;' thus giving the properties of mind to the body as the only explanation of phenomena so wonderful.

Sir Charles Bell on the Hand.

Helping the Dying.

The Rev. John Eagles writes: 'I have often noted a difference in the sympathy with the dying in the rich and in the poor. With the former, there is generally great caution used that the sick should not think themselves going: if it is to be discovered, it is rather in a more delicate attention, a more affectionate look, which the sick cannot at all times distinguish from the ordinary manner. The poor, on the contrary, tell the sick at once, and without any circumlocution, that they never will get over it. Is it that the shock is less to the poor—that they have fewer objects in this world for which life might be de-

sirable. But this is sometimes dangerous. I was once going to visit a poor woman, and met the parish surgeon, and inquired for his patient. He told me the room was full of friends and neighbours, all telling her she couldn't last long; and, said he, "I make no doubt she will not, for she is sinking, because she thinks she is dying; yet I see no other reason why she should, and I could not get one to leave the room." I entered; my authority had a better effect. I turned all but one out of the room, and then addressed the woman, who was apparently exhausted and speechless. I told her exactly what the surgeon had said, and that she would not die, but be restored to her children and husband. The woman positively started, raised herself in bed, and said, with an energy of which I did not think her capable, "What, am I not dying? shan't I die? No! Then, thank the Lord, I shan't die." I gave strict orders that none should be admitted; and the woman did recover, and has often thanked me for having saved her life. Clergymen should be aware of this propensity in the poor, that, when mischievous, they may counteract it.'

Essays Contributed to Blackwood's Magazine.

THAT IT IS WRONG TO DISTURB A PATIENT, SUPPOSED TO BE DYING, WITH ANY MORE MEDICINES OR APPLICATIONS.

Of all vulgar errors, this is certainly the most pernicious. Without taking into consideration the very great uncertainty of our forming a true prognostic of death, if the patient be so low as to be incapable of any sensation whatever; were there but one chance in ten thousand of saving him, by some uncommon means or medicines, a trial most undoubtedly ought to be made, particularly as no harm whatever can happen from its failing. Should we not rather redouble our exertions at the pump in proportion to the increasing urgent danger of the ship's sinking? Have not many drowned persons in whom the pulse and all the vital actions had long ceased been by active means and proper applications restored to life? Is there not a well-authenticated anecdote of a great person in Devonshire, who, after having lain *in state* for a considerable time, was brought to life by his

insolent butler, who before locking up at night, having carried up a bottle of brandy to give the women who watched the corpse a glass a-piece, took off the napkin covering his master's face, and with this taunting speech—'Come, old gentleman, I will not pass *you* by; you shall have one glass now you are dead of what you dearly loved all your lifetime'—opened his master's mouth, and poured a glassful down his throat, which instantly set him coughing, and brought him to life, after which he lived several years? And have no instances been known of corpses having been restored to life, who had undergone a too hasty sepulture by the unfeeling inhumanity of their relatives?

Jones's Medical Vulgar Errors Refuted.

'Post Mortem.'

We learn from a contemporary that M. Heindrich, the headsman of Paris, and, indeed, lately of France, is dead, having discharged the duties of his office for no less than 54 years. During this period 139 criminals had passed through his hands. He was once asked by a visitor whether he thought the separated head continued to live after it had rolled into the basket. He pondered a few minutes, as if to collect his memory, and then related instances which went to support an affirmative answer. Among them he said that on one occasion a woman's head made a faint effort to spit at him; and he spoke of violent contortions occurring in the muscles of Orsini's face. Similar contractions were observed to occur in Queen Mary's face after decapitation. But, surely, none of these movements can be regarded in any other light than as of the nature of reflex actions. The stimulus is, no doubt, the sudden loss of blood, which here, as elsewhere, induces convulsions, and we altogether repudiate the idea that consciousness is preserved even for a moment in the decapitated head. The mere blow must stun, and before recovery occurs the flow of blood from so many large vessels must be sufficient to occasion perfect unconsciousness. M. Heindrich appears to have been a man of some cultivation, or, at least, to have had some interest in his calling, as

he attended Velpeau's lectures in order to acquire a knowledge of the exact position of the *nœud vital.* He also made various improvements in the construction of the instrument with which he operated.

Lancet.

How Soon a Corpse Decays.

Mr. Lewis, of the General Board of Health, from the examination of the contents of nearly 100 coffins, in the vaults and catacombs of London churches, concludes that the complete decomposition of a corpse and its resolution into the ultimate elements, takes place in a leaden coffin with extreme slowness. In a wooden coffin, the remains, with the exception of the bones, disappear in from two to five years. This period depends upon the quality of the wood and the access of air to the coffin. But in leaden coffins, 50, 60, 80, or even more years are required to accomplish this. 'I have opened,' says Mr. Lewis, 'a coffin in which the corpse had been placed for nearly a century, and the ammoniacal gas formed densely white fumes when brought in contact with hydrochloric acid gas, and was so powerful that the head could not remain in it for more than a few seconds at a time.' To render the human body perfectly inert after death, it should be placed in a light wooden coffin, in a pervious soil, from five to eight feet deep.

The Sleep of Death.

In Scripture, the word sleep is used for *death*, because a state of sleep very much resembles a state of death, and also to indicate our hope of a resurrection to life. 'And the graves were opened, and many bodies of the saints which *slept* arose.' See also 1 Cor. xi. 30. Κοιμητήριον, the original of *cemetery* means literally *a dormitory, a sleeping place.* Lord Byron notes 'that singular beauty which pervades, with few exceptions, the features of the dead, a few hours, and but for a few hours, after the spirit is not there. It is to be remarked in cases of violent death by gunshot wounds, the expression is always that of languor—wants even the natural energy of the sufferer's

character; but in death from a stab, the countenance preserves its traits of feeling or ferocity, and the mind its bias to the last.'

Death not Pain.

Mr. Savory distinguishes the Phenomena of Death into general death, and special or molecular death. The latter occurs some time after the last breath has been drawn, since several functions of the body, such as digestion, muscular contraction, and the circulation of the body, may go on for some time after the change we term death has taken place. In this aspect the more important functions of animal life are suspended much sooner than those relating to our organic life. In commenting on the various modes of dying, and all the causes, whether arising from the suspension of the action of either of the three great organs termed the 'tripod of life'—the heart, the lungs, and the brain—Mr. Savory expresses his own conviction that death is primarily occasioned by either the sudden or gradual stoppage of the supply of blood to the nervous centres. He also concurs in the statement of Sir Benjamin Brodie that, in almost all cases, the point of death is free from physical suffering. He duly describes and analyses the signs of death—viz., loss of heat, the muscular contraction termed 'rigor mortis,' the coagulation of the blood, and finally, decomposition. The last, he says, is always going on in life, but is then accompanied by renewal; this ceases after death. The body then becomes subject to the chemical and physical forces, and is resolved into its component elements to be taken up again for the constitution of new organisms. Death, then, is a condition of life.

Death-Rate in England.

The principle on which the rates of mortality are calculated, is not very generally understood. Dr. Lankester has put into a short space some useful explanations of the subject. The mean death-rate in England for some years back has been 22

in a thousand. But these 22 are by no means equally distributed over all the ages of human life. Infants have a much higher, and adults, up to 54 years of age, a much lower rate of mortality than the mean average. Out of every thousand boys born in the world, 183 die in their first year, and only 5 in their sixteenth year. And, again, when the turning-point of middle life is past, the death chances are accelerated with frightful rapidity. 33 out of a thousand die in their sixty-first year, 70 in their seventy-first, 153 in their eighty-first, and so on. Thus it is plain that when in any population the births are very numerous, the increase in the number of young children greatly increases the proportion of deaths; whereas in a population with comparatively few births, the number of deaths will seem proportionately less. As women have better lives than men, from the rate of mortality point of view, the excess of females in a population reduces the death rate.

The Dissevered Head.

Much has been written, and many conflicting opinions expressed, as to whether the head after decapitation retains any sensibility, and the question has been revived in Paris *apropos* of Lemaire's execution. M. Bonnafont gives the following account of an experiment on the dissevered heads of two Arabs, which will probably set the question at rest. He says:—'I was in Algiers in 1833, where I met with a military surgeon, M. de Fallois, who asked me what I thought of the assertion of Dr. Wilson, of New York, that a dissevered head retains its sensibility for two or three minutes. I maintained the impossibility of the asserted fact on physiological grounds; but M. de Fallois remained unconvinced. I heard that on the following day two Arabs were to be beheaded, and obtained leave to make some conclusive experiments on the subject. For this purpose I had placed on the execution ground a small, low table, on which was placed a large shallow vase, nearly filled with powdered plaster. I then went to the place of execution provided with a small ear trumpet, and a very sharp

lancet. It had been agreed that the charus should place the head, immediately after it was cut off, upon the plaster of Paris, so as to stop the hæmorrhage. M. Fallois was to speak to the first head by name, placing the ear trumpet to the ear, while I examined what occurred in the eyes and on the other features. This was done, but, notwithstanding all the shouts into the ear, I could not perceive the slightest sign of life. The eyes remained glassy and motionless; the face discoloured. The muscles gave scarcely any signs of contraction under the influence of the lancet. We changed places when experimenting with the second head, and M. de Fallois convinced himself that death was undoubted and instantaneous. It could not be otherwise, physiologically speaking, for immediately after the division of the large arteries which convey the blood to the encephalon, a sanguineous depletion takes place, which must necessarily bring on syncope.'

British Medical Journal.

Blood Relations Marrying.

Dr. Howe's observations of 17 marriages of blood relations, in his Report on idiocy, gave 95 children, of whom 44 were idiots, 12 scrofulous and puny, 1 deaf, 1 dwarf, 58 in all, of low health, or imperfect, and only 37 of even tolerable health. An unusually large number, over one-fifth, of the marriages were sterile; and I am not aware that this can, in any instance, be imputed to other causes than the influence of consanguinity. Some of the parties to these sterile unions have had excellent corporeal and mental endowments, and have arrived at unusual longevity. In four instances reported to me, females descended from these intermarriages have proved barren without exhibition of any constitutional defect. In one of these instances they had married relatives; in the other two, they married without the circle of family affinity. I shall not attempt to offer any hypothesis as to the active cause of sterility in these cases. It is a subject in reference to which physiological reasoning has, up to the present time, furnished

no satisfactory results. We cannot force our researches into the hidden penetralia of Nature, and there discover how her processes of reproduction are so interfered with, as to render these intermarriages disastrous to their issue; nor by what means she avoids these unfortunate results, by rendering such unions fruitless.

Dr. Bemiss in Dublin Medical Press.

Death of Friends.

Custom so far regulates the sentiments, at least of common minds, that men may generally be observed to grow less tender as they advance in age. He who, when life was new, melted at the loss of every companion, can look in time without concern upon the grave into which his last friend was thrown, and into which himself is ready to fall; not that he is more willing to die than before, but that he is more familiar to the death of others, and therefore is not alarmed so far as to consider how much nearer he approaches his end. But this is to submit tamely to the tyranny of accident, and to suffer our reason to be useless. Every funeral may justly be considered as a summons to prepare for that state into which it shows us that we must sometime enter; and the summons is more loud and piercing as the event of which it warns us is at less distance. To neglect at any time preparation for death is to sleep on our post at a siege; but to omit it in old age is to sleep at an attack.

The Rambler.

On Biology.

Mr. W. S. Savory, F.R.S., in a lecture 'On Life and Death,' stated that his object was to set forth the main features of the science of life—biology, not in mere details or theories, but in generalisations founded on well-ascertained facts. Life exists in the processes termed digestion, absorption, circulation, respiration, excretion, secretion, locomotion, sensation, and

volition, and, in man, mind. With regard to some of these processes the distinction between the animal kingdom can hardly be defined. In animals we find what are called 'types of organisation' and 'grades of development.' By the aid of diagrams Mr. Savory pointed out the similarities and differences between the arm of man, the wing of a bat, the fore leg of a horse, the leg of a reptile, and the pectoral fin of a fish. A certain part in one was elongated, in another shortened, and in another existed only in a rudimentary form. These limbs are therefore termed 'homologous' in type. On the other hand, the wings of insects, having a different structure, are not homologous with those of birds. In regard to morphology, Mr. Savory expressed his opinion that all the parts of an organised being are useful, though we in our ignorance may not perceive it. Proceeding to consider grades of development, he pointed out how we see in nature that the higher the functions of life become, the higher and more complex are the degrees of organisation. There may be a multitude of parts, yet all resembling each other—as the feet of the centipede. Some fishes have fifty times the number of teeth that we possess, yet they are all prehensile, while ours are of different kinds. There is a subdivision of labour in the body resembling that which is absolutely necessary for the maintenance of a highly civilised state of society. The blood has its special organ, the heart; respiration has the lungs, nutrition the teeth, stomach, &c., all distinct, yet by no means independent of each other. On the other hand, in the sea-anemone, so simple in its structure, all these vital functions are carried on without special organs. Yet, in all there appears a 'unity of plan,' as in the case of the lungs, which, in their manifold form of tubes, sacs, and tissues, always manifest their object—the interchange of the blood and air through a permeable membrane. As an example of the law of progress from the general to the special, Mr. Savory commented on the development of the heart of the chick, which at first resembled that of the fish, the 'growth of an individual is the growth of its individuality.' He concluded by dwelling on the indispensable necessity of studying the physiology of animals

and plants in connection with that of man; and in expressing his sense of the expression 'Law of Nature' to be only our perception of that law in the world around us, which gives us such abundant evidence of the existence of a great creative and sustaining Will; that, in fact, the 'Law of Nature' is the 'Law of God.'

Death by the Guillotine.

It is no new thing for sensational theories to be advanced, on very slight grounds, respecting the duration of life after decapitation; but according to Pinel the body dies quietly and painlessly from hæmorrhage in the course of a few minutes; but the brain, being shielded from atmospheric pressure, retains its blood, and consequently its life, for a long period. The sources of common sensation are indeed cut away, but the nerves of hearing, sight, and smell remain, and the whole apparatus of consciousness and intellect is present. Dr. Pinel paints the horrors of a situation which, according to him, may last as long as three hours. But, inasmuch as the poor wretch Troppman has suffered decapitation, we feel it a duty to prevent kind-hearted persons from having their feelings harrowed by the idea that the criminal underwent such ghastly tortures, since a single consideration will suffice to expose the fallacy of all Dr. Pinel's speculations. It is true enough that the brain does retain a large quantity of blood after decapitation; but it is equally certain that that blood rapidly becomes venous from lack of oxygen; and experimentation has amply proved that, in complete asphyxia, consciousness is entirely abolished in one minute and a half, and is, of course, being progressively lowered during the whole of that time. But, considering what a tremendous physical shock is inflicted by decapitation, it is nearly certain that all nervous function must be paralyzed too completely to allow of any phenomena of consciousness taking place during the short period necessary for the perfect deoxydisation of the blood in the brain, after which mental action can never be resumed. At most, the suffering after decapita-

tion can only be an affair of moments, and it is something worse than indiscretion to talk of the possibility of its lasting for hours.

Lancet.

Death by the Bursting of a Vein.

Death by the bursting of a vein is no very uncommon effect of the violence of conflicting and different passions. The Doge, Francis Foscari, on his deposition, in 1457, hearing the bells of St. Mark announce the election of his successor, died suddenly of hæmorrhage, caused by the bursting of a vein in his breast, at the age of eighty years, when, 'Who would have thought the old man had so much blood in him?' Lord Byron notes in 'Don Juan,' 'before I was sixteen years of age, I was witness to a melancholy instance of the same effect of mixed passions upon a young person, who, however, did not die in consequence at that time, but fell a victim some years afterwards to a seizure of the same kind, arising from causes intimately connected with agitation of mind.'

Use of Coffins.

In Bingham's 'Antiquities of the Christian Church,' we find ample proof of the very early use of coffins. During the first three centuries of the Church, one great distinction between heathens and Christians was, that the former burned their dead, and placed the bones and ashes in urns; whilst the latter always buried the corpse, either in a coffin, or embalmed in a catacomb, so that it might be restored at the last day from its original dust. There have frequently been dug out of the barrows which contain Roman urns, ancient British stone coffins. Bede mentions that the Saxons buried their dead in wood. Coffins both of lead and iron were constructed at a very early period. When the royal vaults of St. Denis were desecrated during the first French Revolution, coffins were exposed that had lain there for ages. Notwithstanding all this, it appears that, both in the Norman and English period, the common people of the country were often wrapped up in a

cere-cloth after death, and so placed, coffinless, in the earth. The illuminations in the old missals represent this. And it is not impossible that the extract from the 'Table of Dutyes,' may refer to a lingering continuance of this custom. Indeed, a statute passed in 1678, ordering that all dead bodies shall be interred in woollen and no other material, is so worded as to give the idea that there might be interments without coffins. The statute forbids that any person be put in wrapt or wound up, or buried in any shirt, shift, sheet, or shroud, unless made of sheep's wool only; or in any coffin lined or faced with any material but sheep's wool, as if the person might be buried either in a garment or in a coffin, so long as the former was made of, or the latter lined with wool.

Rev. Alfred Gatty: Notes and Queries, 1st Series, No. 45.

Interment of The Dead.

Wooden coffins were used very early; remains of them, with the iron clamps by which they have been fastened together, have been found in barrows—for instance, in the barrow called Lamal Hill, near York, which is made out by Dr. Thurnam to be of Saxon date. A curious example of an early wood coffin, formed of a hollow oak trunk, is preserved in the museum at Scarborough. There is a notice of the discovery of several wood coffins near Haltwhistle, Lancashire, in the 'Archæol. Æliana,' vol. ii., p. 177. One, which was perfect, is described as 'cut out of the bole of an oak tree, which has been split by the wedge, and hollowed out in a very rough manner, to admit the body (bones were found in it); the lid was secured at the head and feet by wooden pins.' From the rudeness of the workmanship, these must have been of very early date. The Monk of Glastonbury says, 'that King Arthur was buried in a trunk of oak hollowed, which proves, at least, that in his time this was an ancient mode of burial.' Lead coffins, too, were in very early use; oblong lead coffins, the sides cast in ornamental moulds, were used by the Romans. King Stephen, we believe, was buried in one: there are notices and engravings of several found in the Temple Church, and in Mr. Richard-

son's work on the restoration of the monuments there. They were used sparingly until the end of the fourteenth century, when they became more general. The old lead coffins were rather winding sheets of lead, for they fitted rudely to the shape of the body: their appearance agrees exactly with the idea conveyed in the ballad of the little 'St. Hugh of Lincoln:' —'Scho round him in a cake o' lead.' A representation of one found at Mauveysia (Ridware), Staffordshire, is given in 'Shaw's History of Staffordshire,' plate 11, p. 193. These were sometimes enclosed in a wooden chest or coffin, sometimes in a stone chest or altar-tomb, surmounted by an effigy or monumental brass. Thus the lead coffin of the Bishop in the Temple Church was enclosed in a stone coffin. Frequently the body was laid in the grave enclosed only in a winding-sheet, or sewed up in some garment (perhaps, occasionally, a hide). In the representations of the Last Judgment, which occur so frequently in illuminated MSS. of all dates, we constantly find the dead arising from open graves as well as from stone coffins. In the splendid MSS. in the British Museum, called the Durham Gospels, and which Mr. Westwood (Palæographia Sacra) makes out were written about the close of the seventh century, we find representations of the patriarchs folded in winding-sheets, which fall loosely in large folds, being laid in the grave without any coffin. In an illumination of date, *circa* A.D. 1180, of which there is a copy in the collection of the Archæological Institute, we see a body about to be committed to the grave, which is sewn up in front in some garment, and a cross is marked upon the face. In the Douce MS., is the representation of a woman sewing up a naked corpse after this fashion, in a white winding-sheet. In the Gagnières collection, there is an incised slab on which is represented a corpse sewn up in this manner, dated A.D. 1446. It is rather singular that in most of these cases, the body appears quite flexible. There are also representations of corpses wrapped up after similar fashions, being placed in stone coffins, as in an entombment from the MS. of Mathew Paris, before mentioned, folio 198. Here, however, the corpse is swathed round and round with narrow fillets crossing in a lozenge

pattern. In the Gospels of St. Augustine (Mr. Westwood's Palæographia Sacra), Lazarus is similarly represented, rising from the tomb: the date of this illumination is the sixth century. In a representation of the raising of Lazarus upon the fine Norman font at Lenton, Notts, Lazarus is swathed in this same manner, and is lying in a stone coffin, from which two men are raising the lid. And it is curious enough to find exactly the same custom still common in the sixteenth century, when we find children very frequently represented in this way on altar and mural tombs; there is a representation of one upon an incised slab at Morley, Derbyshire. In an entombment in the Luttrell Psalter, the corpse, lying in a stone coffin, is enclosed in a tight winding-sheet, gathered at the neck, and marked with a row of small crosses down the body; the coped lid has a floriated cross upon it. In an illumination in the Cott. MS., (date eleventh century), the tight-fitting garment in which the corpse is wrapped is diapered with a pattern of quatrefoils within squares.

Sepulchral Slabs of the Middle Ages.

Buried Alive.

Every nation (says Dr. Millingen), however uncivilised, holds the idea of being buried alive in constant dread. The horrors of such a situation cannot be described. Bodies have been found where the miserable victims of precipitation had actually devoured the flesh of their arms in the agonies of hunger and despair. Such was the fate of John Scott and Zeno. It is to be feared that this melancholy occurrence is more frequent than is supposed, more especially in countries where inhumation is speedily resorted to. The ancients were remarkably cautious in this respect, especially when we take into consideration the climate of Greece and Rome during the summer months. A law of Greece upon this subject directs that 'the corpse should be laid out at the relations' pleasure, but that the following morning before daylight the funeral procession should take place.' From various authorities, however, it appears that the bodies were kept three, and sometimes six days. Servius was

of opinion that the time for burning bodies was the eighth day, and the time for burying the tenth; it appears, however, that this was a privilege granted to the wealthy, as the poor were consumed the day after their death, a custom alluded to in an epigram of Callimachus. Among the Romans several days were also allowed to elapse before interment—sometimes seven days; during which, loud cries, in which the deceased was called by his name, and the noise of various instruments, resounded near the body; this was called the *conclamatio*, alluded to by Terence.

The ancients held hasty inhumation in great dread, and grounded their apprehension on various current traditions. Thus Plato remarks the case of a warrior who was left for ten days on the field of battle amongst the dead, and who came to life when he was being borne to the sepulchre. Asclepiades restored life to a man who was also consigned to the funeral pile, and Pliny relates the case of Lucius Aviola and Lucius Lamia, who showed signs of life upon the pile, but were too much injured to be saved.

Amongst the many absurd fancies regarding the dead, was the superstitious belief of their being able to masticate in their coffin any substance buried with them. Women more especially were believed to be gifted with this *post-mortem* faculty of moving their jaw-bones very loudly. *Claro sonitu*, says the learned Michael Ranfft, in his curious and elaborate work, *de masticatione mortuorum*. In this apprehension, that the deceased in their hunger might devour their own limbs, articles of food were interred with them.

According to the law of the Jews, who appear to have been in constant dread of pestilential disease, the inhumation of the dead was most hasty. Yet in this instance many Rabbi maintain that the Talmud has been erroneously interpreted, for although it decreed that a night should not be allowed to pass before inhumation, it clearly meant that actual death must have been ascertained.

While such fears are entertained of suspended animation being taken for dissolution, it is strange that in some savage tribes the aged are allowed to perish without any care being

taken to prolong their lives. Such is the custom of some of the Esquimaux, where old and decrepit creatures are abandoned in their huts and left to their fate. An ancient tradition stated that the inhabitants of the Isle of Syria never died of any distemper, but dropped into their graves at a certain old age.

It would be desirable that in cases where interment is speedily resorted to, a physician should attend, in order to ascertain that death has actually taken place. This is seldom practised, from the common saying 'that it is uncivil on the part of a doctor to visit a dead patient.' Various means are employed to ascertain death: the looking-glass applied to the mouth of the corpse, to find out whether the breath has departed; the coldness of the extremities, the falling of the lower jaw, the rigidity of the limbs, and various other appearances, are universally known; but in the villages of Italy and Portugal, pins and needles are frequently driven under the nails, in what is vulgarly called *the quick*, to excite an excruciating pain if life should not have fled. The most certain evidence, when bodies are long kept, is most decidedly the commencement of decomposition; but, in other cases, the action of the voltaic pile on a bared muscle is an infallible test.

It is much to be feared that on the field of battle and in naval actions many individuals apparently dead are buried or thrown overboard. The history of François de Civille, a French captain, who was missing at the siege of Rouen, is curious: at the storming of the town he was supposed to have been killed, and was thrown, with other bodies, in the ditch, where he remained from eleven in the morning to half-past six in the evening; when his servant, observing some latent heat, carried the body into the house. For five days and five nights his master did not exhibit the slightest sign of life, although the body gradually recovered its warmth. At the expiration of this time, the town was carried by assault, and the servants of an officer belonging to the besiegers, having found the supposed corpse of Civille, threw it out of window, with no other covering than his shirt. Fortunately for the

captain, he had fallen upon a dunghill, where he remained senseless for three days longer, when his body was taken up by his relations for sepulture, and ultimately brought to life. What was still more strange, Civille, like Macduff, had been 'from his mother's womb untimely ripp'd,' having been brought into the world by a Cæsarean operation, which his mother did not survive; and after his last wonderful escape he used to sign his name with the addition of 'three times born, three times buried, and three times risen from the dead by the grace of God.'

The fate of the unfortunate Abbé Prevost, author of 'Manon Lescaut,' and other esteemed novels, was lamentable beyond expression. In passing through the forest of Chantilly, he was seized with an apoplectic fit: the body, cold and motionless, was found the following morning, and carried by some woodcutters to the village surgeon, who proceeded to open it; it was during this terrific operation that the wretched man was roused to a sense of his miserable condition by the agonies he endured, to expire soon after in all the complicated horrors of his situation. Various cases are recorded where persons have remained in a state of apparent death for a considerable time. Cullen mentions an hysterical woman who was deprived of movement and sensibility for six days. Licelus knew a nun of Brescia, who, after an hysteric attack, continued in an inanimate state for ten days and nights.

Curiosities of Medical Experience.

SUPPLEMENTARY.

The Medical Schools of London.

(Abridged from a graphic paper in the Athenæum).

Unlike our ancient universities, which were planted in pre-Norman times, the medical schools of London are institutions of recent origin. Long after the Inns of Court had sprung up on the western outskirts of the town, and gathered within their walls a crowd of well-descended students, the stranger visiting the metropolis of England would have sought in vain for any public seminary of medical learning, or any school where the principles and practice of surgery were explained by competent professors. Edward the Fourth's Company of Barber-Surgeons was merely an association of tradesmen, plying their craft within a narrow circle. Henry the Eighth's Incorporated Society of Surgeons, formed mainly out of the fourth Edward's corporation of Barbers, and destined to produce our present College of Surgeons, was a commercial guild rather than a school of sound learning. Like other commercial associations of the same kind, it had its mysteries as well as its privileges, and the expounders of these secrets were men esteemed in their fraternity for sagacity and discretion; but its claims to the respect due to science were very slender. Its aims were low, its influence of no significance beyond the small area over which it enjoyed a monopoly. In no sense was it a national institution. The same, of course, may be said of the Society of Apothecaries, incorporated by James the First, which, after a course of noticeable vigour as a commercial association, obtained control of the medical education of the country through the provisions of the Act of 1815, 'For the Better Regulating of the Practice of Apothecaries throughout

England and Wales.' To this measure, which, notwithstanding manifest defects, worked well for the interests of medical science, we are indebted for our present seminaries of medical science, which, taken together, may be said to make up the University of Medicine, just as the disconnected inns of law were formerly called the University of Law.

In the seventeenth and eighteenth centuries, the College of Physicians, the Company of Surgeons, and the Society of Apothecaries exercised a more or less efficient control over the doctors, surgeons, and apothecaries of London. The country surgeon learned his business like the country butcher, in most instances from a master to whom he had been bound apprentice. His term of apprenticeship over, he started on his own account with a bag of clumsy instruments, a few pots and bottles of simples and drugs, and such traditions of medical art and empirical usage as had come to him from an ignorant teacher, who had picked them up—the Lord knows where—from some one who, in his turn, had picked them up—the Lord knows how. Any village cobbler was at liberty to throw away his awl and seek fortune—as herb-doctor, wise man, nostrum-vendor, bone-setter, mountebank. The most intelligent and successful practitioners of physic and surgery in our rural districts were men whose best teachers had been one or two old herbalists and books on midwifery, and whose only licence to practise was the licence which every free-born Englishman enjoyed to call himself a doctor and to act as such, whenever it suited his purpose to do so. It is creditable to the natural sagacity of our species, that men of such antecedents did somehow acquire a rude knowledge of their professed art; that they could set bones after a fashion, breathe a vein without always puncturing an artery in the process, and obtain the respect of their neighbours by obstetric skill and efficiency in dental surgery. So long as country practitioners were under no obligation to qualify themselves for their vocation in the medical schools of the capital, few of them ever entered the wards of St. Bartholomew's or the Borough hospitals; still fewer presented themselves before the examiners of Surgeons' Hall or the Apothecaries' Society. Indeed, so far as the in-

struction of apprentices was concerned, the authorities of those institutions led easy lives. Even when a war created an unusual demand for surgeons and surgeons' assistants to serve in the army or navy, the examiners of the former association were not heavily taxed by the number of candidates who presented themselves for examination.

Nor in many cases were the tests by which they satisfied themselves as to the fitness of applicants otherwise than formal. When Roderick Random was examined at Surgeons' Hall, and received his certificate for an appointment to a ship of war, he was one of a small bevy of medical apprentices seeking like engagements, and the examination which he underwent was as farcical as the dispute between two examiners in which it terminated. That the novelist gives a humorous account of the Surgeons' Hall examination is true; but, as a member of the medical profession, he would not have directed unjustifiable ridicule against the order to which he belonged, and as a painter of social manners he was too prudent and sagacious an artist to have produced a picture which his contemporaries would have condemned as a malicious libel, instead of laughing over it as a good caricature. In Smollett's time, whilst the educational system of Surgeons' Hall was a satire on academic instruction, the students who sought knowledge within its walls were not a twentieth part of the apprentices about to practise surgery. When a murderer's body was dissected in its theatre, the instructive spectacle was witnessed by just such a group of gowned veterans and prying youngsters as Hogarth has commemorated in the 'Reward of Cruelty.' The same was the case with the hospitals where students were invited to make themselves masters of diagnosis by daily observation of disease. The patients were numerous, the physicians went their appointed rounds, but the pupils were few. When young Lettsom saw Akenside, with a sword at his side and a well-powdered wig on his head, limping along the wards of St. Thomas's Hospital, through a crowd of debilitated sufferers, whom a select body-guard of stronger patients were employed to drive backwards with brooms, the astonished and indignant student had not many fellow-pupils at hand to whom he could express his

disgust at the insolence and harshness with which the poet, who had written so charmingly about the pleasures of imagination, discharged the prosaic duties of a distasteful office. Towards the close of the eighteenth, and during the first years of the present century, the average number of medical pupils at the London hospitals greatly increased,—the fame of such men as Hunter and Cline, Abernethy and Astley Cooper, attracting from the provinces young men of superior intelligence and purpose, who saw that to have attended the classes of such teachers would give them advantages over their competitors in provincial practice. But the provincial apprentices who thus qualified themselves for practice by coming to town for a course of study were at most a small minority of their class, until the Medical Act of 1815 ordained that no one should practise the calling of an apothecary—that is, the calling of what is now ordinarily termed a general practitioner—who should not have obtained a certificate of qualification from the authorities of the Society in Water Lane. The position of apothecaries already in practice was not directly affected by this measure, which, with more regard for the interests of individuals than the welfare of the community, permitted existing practitioners to continue in the course on which they had entered with a scandalously insufficient stock of knowledge and skill. It should, however, be borne in mind, that whilst our country doctors were, as a class, chiefly noticeable for incompetence, their ranks comprised men of great intelligence and scientific attainments—men also whose achievements cast lustre on their profession, and conferred important benefits on their species. It is still the boast of our provincial doctors that Edward Jenner, the discoverer of vaccination, was a general practitioner in Gloucestershire when he made that remarkable series of observations and deductions which resulted in the liberation of our race from the most malignant forms of a dangerous and repulsive disease. Personal experience of the difficulties and disagreeable incidents of country practice inspired the famous Gloucestershire apothecary to sing—

> Unhappy he whom fate doth urge on
> To practise as a country surgeon.

Smallpox and Vaccination.

The Annual Report of the Homerton Fever Hospital, which is one of the institutions raised under Mr. Gathorne Hardy's Act of 1867 by the managers of the Metropolitan Asylums, has been presented to the Board by Dr. Collie, the medical superintendent. This hospital, though now for fever, was, when first built, used for the epidemic of smallpox, which was then—February 1871—just rising into great proportions; and that it was a valuable assistant to the Smallpox Hospital, which it adjoins, is to be seen from the fact that from the middle of February until the middle of June nearly 1,200 cases were treated within its walls. These institutions, it is now pretty well known, are rate-supported, and the patients are admitted on the orders of the relieving officer of the various Unions in the metropolis 'district,' the purpose being to isolate these contagious diseases and prevent the spread of infection. Dr. Collie first gives his experience of the smallpox which came under his notice, and his deductions are of a valuable character. He presents two tables, and citing Mr. Marston, of the Highgate (Voluntary) Smallpox Hospital as one of the best authorities on the subject of smallpox, he states that, according to the standard of Mr. Marston, only 13 in 1,000 of the cases which came into Homerton had been properly vaccinated, and this disproved the common error that more vaccinated than unvaccinated persons were attacked by smallpox. Taking, however, the very low standard of the Vaccine Institute of 1820 with Mr. Marston's standard and all, there were but 65 in the 1,000 cases properly vaccinated. As another instance of the importance of vaccination, Dr. Marston shows that of 100 children attacked with smallpox 68 had not been vaccinated at all, 15 had been badly vaccinated, 10 'fairly well' vaccinated, and but seven well vaccinated. Of these children, 26, all unvaccinated, had smallpox in a severe form; not a single severe attack occurred in a vaccinated child, and only seven well vaccinated children had the disease, which consisted of slight indisposition, accompanied by a few pimples, hardly deserving the name of smallpox. Of 152 cases of severe

smallpox, after 12 years of age, 51 per cent. occurred among the unvaccinated, 23 per cent. among the badly vaccinated, 4 per cent. among the 'fairly well' vaccinated, and among the 'well' vaccinated there was but one case.

Of all the cases in the hospital, not one death occurred to a properly protected person, and the proportions of deaths have been, to persons over 15 years of age, the unvaccinated, 47 per cent.; the badly vaccinated, 26 per cent.; the tolerably vaccinated, 8 per cent.; the fairly vaccinated, 4 per cent.; and the well vaccinated none at all. No case of smallpox had been seen after re-vaccination. The hospital was opened for fever cases, after being cleared of smallpox and thoroughly disinfected, on the 1st of October of last year, and since that date there had been admitted 611 cases, including 192 cases of disease (or nearly one-third of the whole) other than those for which the hospital was intended to provide. Of the whole number 434 had been discharged recovered, 124 had died, and 15 were sent to the Smallpox Hospital. The mortality of the whole had been 20 per cent., but deducting those cases (31 in number) in which death occurred within 12, 24, and 48 hours of admission, and who were, therefore, beyond treatment, the mortality was reduced to 13·5 per cent. The cases were divided into typhus, 82; enteric, 183; scarlet, 79; simple continued, 75; measles, 8; smallpox (sent in mistake) 17; other acute diseases (sent in mistakes or by wrong diagnoses) 157; debility, 10. Of these patients, 278 were males and 333 females, and 190 of the males and 244 of the females were discharged recovered, while 15 were sent to the Smallpox Hospital. Dr. Collie considers that the typhus returns prove that the epidemic of that disease which commenced in 1861 has now practically ceased, for in the year before 411 cases were admitted into the London Fever Hospital, the position of which, in respect of the pauper poor, has been taken by Homerton Hospital. The doctor, in the concluding part of his report, says the contagious diseases which have been enumerated have not been treated with impunity to the attendants. Five nurses contracted typhus fever, three of whom died; three contracted scarlet fever, two enteric fever (both

young women), and two measles, all of whom recovered. One assistant medical officer contracted scarlet fever, from which he recovered. One porter died of pyæmia, supposed to be the result of a wound received in the *post-mortem* room. About 40 other cases of illness occurred in the staff, such as diarrhœa, dyspepsia, sore throat, debility, &c. 'These facts point to the great importance of retaining in the service of the hospital seasoned nurses and servants, and especially such as have had one or more of the contagious fevers.'

Saint Thomas's Hospital.

St. Thomas's Hospital (Medical) was originally a house of alms, founded by the Prior of Bermondseye in 1213, adjoining the wall of that monastery. After the Surrender in 1539, it was purchased by the City of London, chartered, in 1551, as one of the five royal foundations, and opened in 1552. In 1569, the funds were so low that a lease was pawned for 50*l.* Strange mutations have come over this spot, which for six centuries and a half had been the site of a Hospital, or nearly three centuries and a half before it was refounded and endowed by the pious King Edward VI., who confirmed the gift only ten days before his death; and it was delivered over by charter (the 5th and 7th of Edward VI.) to the mayor, commonalty, and citizens of London, and was named the London House of the Poor in Southwark, to be situated in London or Southwark, for poor, sick, infirm, wayfaring people. Much injury was done to the property belonging to the establishment by the fires which took place in Southwark in 1676, 1681, and 1689, although the Hospital itself suffered no damage on either occasion. The fire of 1676 consumed five hundred houses in Southwark, 'yet,' says Hatton, 'as by the particular will of Heaven, was extinguished at this Hospital.' However, at the close of the seventeenth century the buildings had become so much decayed that there was founded a subscription fund, to which Sir Robert Clayton, the President, contributed 600*l.*; he also bequeathed to the sick poor 2,300*l.* The Hospital was enlarged in 1732: the wards Frederick and Guy were named

from their founders, the latter of whom built a pair of large iron gates; on the two piers were statues of cripples. The Hospital was, in part, reconstructed in 1835, by Sir Robert Smirke and Mr. Field. The site of the new north wing of the Hospital, at the south end of London Bridge, was purchased of the City of London for the sum of 40,850*l.*, which was not considered an extravagant price, though at the rate of 54,885*l.* per acre. The site of two houses adjoining the above spot was sold by the Hospital to the City at the enormous rate of 69,935*l.* per acre! The Hospital consisted of three courts and colonnades: in the first court was a bronze statue of Edward VI., by Scheemakers, set up by Charles Joyce, Esq., in 1737. In the second court was the chapel for patients—service daily; St. Thomas's church; the hall and kitchen; and over the Doric colonnade was the Court-room, with portraits of Edward VI., William III. and Queen Mary, Sir Robert Clayton, and other of the Hospital presidents. In the third court was the statue of Sir Robert Clayton, robed as Lord Mayor, erected in his lifetime by the Hospital governors. In a smaller court were the cutting-ward, surgery, bathing-rooms, theatre, and dead-house. There were twenty wards for patients, each superintended by a Sister. The Hospital, of four acres, and buildings were on the east side of High Street, Southwark, and the site was sold to the Charing Cross Railway Company; the governors claiming as compensation 750,000*l.* The Railway Company offered them terms equivalent to 400,000*l.*; and, after a litigation which absorbed little less than 25,000*l.*, 296,000*l.*, was awarded by the arbitrator. The patients were then removed to a temporary hospital, late a Music Hall, Surrey Zoological Gardens. It was next proposed to rebuild the Hospital in the country; but the choice of a site in the metropolis prevailed. It was contended that in 1631 the Lord Mayor counted 16,880 persons in Southwark, and that now Southwark and the neighbouring parishes, all of which are obliged to avail themselves largely of the aid of this Hospital, contain more than half a million persons, the great majority of whom are poor hard-working people. The site was definitely settled in Stangate, facing the Thames, immediately west of the southern end of Westminster Bridge.

In November 1866 was decided, in the Court of Queen's Bench, the case relating to the right of the Corporation of London as to the election of presidents of the four great City Hospitals. The question was whether it was necessary that the president should be an alderman who had arrived at the dignity of Lord Mayor; or, at all events, an alderman. There were two candidates, of whom Mr. Cubitt (since deceased), who had the majority of votes, having resigned his gown—although he had 'passed the chair'—was not an alderman; and his opponent, Alderman Rose, was at the time Lord Mayor, so that he was both alderman and 'Grey cloake'—the term used in the ordinances to denote those aldermen who had passed the chair. Judgment was given for the defendants—that is, for the Hospital. The result of the decision is that the governors of the great Hospitals have free choice in the election of their presidents.

Abridged from Curiosities of London, enlarged edition.

Phosphorus first made in Covent Garden.

Until the year 1863 there flourished in Southampton Street, Covent Garden, the establishment of Messrs. Godfrey and Cooke, noted as the oldest chemists and druggists' shop in London. The house has a handsome modernised front. *Here phosphorus was first manufactured in England;* the premises having been the house, shop, and laboratory of Ambrose Godfrey Hanckwitz, who, immediately after the discovery of phosphorus by Brandt, the alchemist, under the instructions of the celebrated Robert Boyle succeeded in preparing an ounce of the substance, and presented it to his master. Boyle's accounts of it, and his experiments, caused a demand for phosphorus; and Hanckwitz, working under Boyle's direction, commenced to manufacture it, and produced it in larger quantities than any other person. In his advertisement he says: 'For the information of the curious, he is the only one in London who makes inflammable phosphorus, which can be preserved in water. Phosphorus of Bolognian stone, flowers of phosphorus, black phosphorus, and that made with acid oil,

and other varieties. All unadulterated; every description of good drugs. He sells wholesale and retail. N.B.—He sells solid phosphorus wholesale, fifty shillings an ounce, and retail, three pounds sterling the ounce.'

Bedford House was taken down in 1704, and Southampton Street was then commenced: here, in 1706, Hanckwitz built his premises, the business of a chemist having been carried on by him in the neighbourhood since 1680. Jacob Bell, in his 'Historical Sketch of the Progress of Pharmacy in Great Britain,' tells us that Hanckwitz 'was a maker of phosphorus and other chemicals which were rare at that period, and which he sold in different parts of the country during his travels. His laboratory was a fashionable resort in the afternoon on certain occasions, when he performed popular experiments for the amusement of his friends. Four curious old prints of this laboratory in its former state are in the possession of Messrs. Godfrey and Cooke (removed to Knightsbridge); also a portrait of Hanckwitz, engraved by Vertue (1718), which he had distributed among his customers as a keepsake.' Hanckwitz died in 1741. His successors, Godfrey and Cooke, maintained the date 1680 on their premises in Southampton Street, and upon a board over the entrance to the laboratory in Maiden Lane, which next became a potato-store!

'Since about the year 1660' (says Dr. George Wilson) 'we have been familiar with phosphorus as a soft, semi-transparent, nearly colourless, wax-like substance, possessed of a glassy structure, exhaling in the air an odour of garlic, shining at the freezing-point of water, melting a hundred degrees below the boiling point (111·5° F.) of that liquid, bursting into flame in the air at a temperature a little higher, and yielding a thick white smoke, condensing into a snow of phosphoric acid. This form of the element we have learned to distinguish as vitreous phosphorus. It is so inflammable that it can be preserved with safety only under water, and there is scarcely a chemist who has not been in some degree a martyr to its flames. It is so poisonous that not a year passes without some poor child falling a victim to the minute portion which it thoughtlessly eats from a lucifer-match, and without uncautioned

lucifer-match makers suffering the prolonged torture of slow poisoning, which its daily administration in infinitesimal doses occasions. It reacts so powerfully upon the air in which it is permitted to fume, that it changes its oxygen into the energetic, oxidising, deodorising, and bleaching agent which is known as ozone. In a word, it exhibits, in an intense degree, an affinity or tendency to combine alike with metals and non-metals, and strikingly alters each by its union with it.'

Superstitions about New-born Children.

It is unlucky to weigh them. If you do, they will probably die, and, at any rate, will not thrive. I have caused great concern in the mind of a worthy old monthly nurse by insisting on weighing mine. They have, however, all done very well, with the exception of one, the weighing of whom was accidentally forgotten to be performed.

The nurses always protested against the weighing, though in a timorous sort of way; saying that, no doubt it was all nonsense, but still it had better not be done.

It is not good for children to sleep upon bones—that is, upon the lap. There seems to be some sense in this notion; it is doubtless better for a child to be supported throughout its whole length, instead of hanging down its head or legs, as it might probably do if sleeping on the lap.

Hesiod, in his 'Works and Days,' forbids children of twelve months, or twelve years old, to be placed ἐπ' ἀκινήτοισι,—upon things not to be moved—which some have understood to mean *sepulchres:* if this is right, perhaps there is some connection between his injunction, and that which condemns the sleeping upon bones, though the modern bones are those of the living, and not of the dead.

Cats suck the breath of infants, and so kill them. This extremely unphilosophical notion of cats preferring exhausted to pure air, is frequently a cause of great annoyance to poor pussy, when, after having established herself close to baby, in a snug warm cradle, she finds herself ignominiously hustled out

under suspicion of compassing the death of her quiet new acquaintance, who is not yet big enough to pull her tail.

When children first leave their mother's room, they must go *upstairs* before they go *down-stairs*, otherwise they will never rise in the world.

Of course it frequently happens that there is no 'upstairs'—that the mother's room is the highest in the house. In this case the difficulty is met by the nurse setting a *chair*, and stepping upon that with the child in her arms as she leaves the room. I have seen this done.

A mother must not go outside her own house-door till she goes to be 'churched.' Of course the *principle* of this is a good one. It is right, under such circumstances, the first use a woman should make of her restored strength should be to go to church, and thank God for her recovery; but in practice this principle sometimes degenerates into mere superstition.

If you rock an *empty* cradle, you will rock a new baby into it.' This is a superstition *in viridi observantiâ*, and it is quite curious to see the face of alarm with which a poor woman with her tenth baby in her arms, will dash across a room to prevent the 'baby-but-one' from engaging in such a dangerous amusement as rocking the empty cradle.

In connection with this subject, it may be mentioned that there is a widely-spread notion among the poorer classes, that rice, as an article of food, prevents the increase of the population. How the populousness of India and China are accounted for on this theory, I cannot say; probably those who entertain it never fully realise the existence of 'foreign parts,' but it is certain that there was not long ago a great outcry against the giving of rice to poor people under the poor law, as it was said to be done with a purpose.

Chambers's Book of Days.

Dr. Graham's Quackeries.

(*See vol. i. of 'Doctors and Patients,' p.* 218.)

In 1780 George Colman wrote for the Haymarket Theatre the extravaganza of the 'Genius of Nonsense,' or, as the news-

papers termed it, the 'Nonsense of Genius,' in which that notorious quack, Dr. Graham, was humorously satirised. The Doctor himself was in a stage-box the first night, and besides seeing his Temple of Health ridiculed, had the chagrin of being refused purchasing one of the bills delivered upon the stage as a burlesque of his own.

Now, Graham's 'Temple' was gaudily *fitted* up on the Terrace in the Adelphi; there he gave evening lectures upon electricity; there he exhibited his satin sofa on glass legs, and his Celestial Bed, which was to effect heaven only knows what; his two porters, outside the door, in long tawdry great-coats, and immense gold-laced cocked hats, distributed his puffs in handbills; while his Goddess of Health was dying of a sore-throat, by squalling songs at the top of his cold staircase. All these matters were introduced into the 'Genius of Nonsense.' The quack, having heard of the satire, threatened Colman with an action for libel, and went to the theatre to collect evidence, for which purpose he demanded repeatedly from the stage-box a handbill from the representatives of his own porters—but was as often refused. Young Bannister was the speaking harlequin of the piece, which Colman insisted should be a portrait of the individual quack. To ensure this, he visited the Temple of Health, and there saw the Doctor and his nonsensical solemnities, which Bannister burlesqued with excellent effect upon the Haymarket stage. His mere entrance upon the scene, as the Doctor was wont to present himself in his Temple, his grotesque mode of sliding round the room, the bobbing bows he shot off to the company, and other minutiæ, were so ridiculously accurate, that he surpassed his prototype, in electrifying the public, and, according to George Colman the Younger, the whole house was in a roar of laughter. The threatened action fell to the ground.

Stealing a Dead Body.

The burial-ground of St. George the Martyr, Queen Square, Bloomsbury, is a long and narrow slip of ground behind the Foundling Hospital, to which a remarkable circumstance is

attached. On October 9, 1777, the gravedigger and others were detected in the act of stealing a corpse from this ground for dissection, the only instance of this kind then ever known, and which, in consequence, involved a difficulty in the decision of the law, from its being the first indictment on record for such a crime.

John Holmes, the gravedigger of St. George's; Robert Williams, his assistant; and Esther Donaldson, were tried under an indictment for a misdemeanour, before Sir John Hawkins, chairman, at Guildhall, Westminster, December 6, 1777, for stealing the dead body of one Mrs. Jane Sainsbury, who died in the October preceding, and was interred in the burial-place of the said parish. Mr. Howarth, counsel for the prosecution, stated the case to the jury. Mr. Keys, counsel for the prisoners, objected to the indictment, and contended that if the offence was not felony, it was nothing, for it could not be a misdemeanour, therefore not cognizable by that court, or contrary to any law whatever. Sir J. Hawkins inquired of Mr. Howarth the reason for not indicting for a felony, as thereby the court was armed with power to punish as severely as such acts deserved. Mr. Howarth explained this, by saying, that to constitute a felony there must be a felonious act of taking away property; and if the shroud, or any other thing, such as the pillow, &c., or any part of it, had been stolen, it would have been a felony. In this case, he said, nothing of that kind had been done, the body only having been stolen; and though, in their hurry of conveying away the deceased, the thieves had torn off the shroud, and left pieces in the churchyard, yet there being no intention of taking them away, it was no felony, and, therefore, only a misdemeanour. Mr. Keys again insisted it was no misdemeanour; but Sir John Hawkins very ably refuted him, reminding him that if his objection was good, it was premature, for it would come as a motion for an arrest of judgment. The trial then went on.

Mr. Eustanston, who lived near the Foundling Hospital, deposed that, going by that hospital, about eight o'clock in the evening, with some other gentlemen, they met the prisoner Williams with a sack on his back, and another person walking

with him. Having some suspicion of a robbery, he stopped Williams, and asked him what he had got there? to which he replied, 'I don't know;' but that pulling the sack forcibly from his back, he begged to be let go, and said he was 'a poor man just come from harvest.' Mr. Eustanston then untied the sack, and, to his astonishment, found the deceased body of a woman, her heels tied up tight behind her, her hands tied together behind, and cords round her neck, forcibly bending her head almost between her legs. They were so horrified as to be prevented securing the companion of Williams, but they took him to the Round House, where he was well known to be the assistant-gravedigger to Holmes, and went by the name of Bobby. Next day, Holmes being applied to as he was digging in the burial-ground, denied all knowledge of Bobby, or Williams, or any such man. Neither could he recollect if anybody had been buried within the last few days, or if there had, he could not tell where. However, by the appearance of the mould, they insisted on his running into the ground his long iron crow, and then they discovered a coffin, only six inches under ground, out of which the body had been taken. This coffin had been buried a few days before, very deep; the ground was further examined, and another coffin was discovered, out of which the body of Mrs. Jane Sainsbury had been stolen; and whilst this search was taking place, Holmes was detected hiding in his pocket several small pieces of shroud, which lay around the grave.

Mr. Sainsbury was under the painful necessity of appearing in court, when he identified the body found on Williams as that of his deceased wife. Williams was proved to have been constantly employed by Holmes, in whose house were found several sacks marked H. Ellis—the mark upon the sack in which Mrs. Sainsbury was tied. The jury found the two men guilty, but acquitted Esther Donaldson. They were sentenced to six months' imprisonment, and each to be severely whipped twice in the last week of their confinement, from Kingsgate Street to Dyott Street, St. Giles's—full half a mile; but the whipping was afterwards remitted.

Classic History of the Rose.

The Rose is mentioned by Homer and Anacreon. By the former in the hymn to Ceres, by the latter in many of his odes; through which we learn that it was a flower remarkable for the beauty of its petals, that it grew amidst thorns, that it had a divine fragrance, was of the colour of the human complexion, that it was the most beautiful of all flowers, 'the queen of flowers,' 'the flower of love.' We need scarcely add the pretty legend of the rose having been reputed to have grown white only till Venus, running after Adonis, scratched her legs upon its thorns, and stained the flower red with her blood!

According to the natural calendar of Greece, the rose blossomed in March, the Rosa Græca, or Lychius coronaria, in May. In the Roman calendar we find early roses bloomed in April, and in May they were generally in flower. In Egypt, according to Theophrastus, the rose blossomed two months before it appeared in Italy.

Among the ancients the rose was employed as a medicinal remedy, at their festivals and sacred ceremonies, and as an article of luxury at their banquets. Of its medicinal uses frequent mention is made by Oribasius, Actuarius, Marcellus, Celsus, &c., together with many ancient writers on pharmacy.

Roses were also strewed on the tables at their convivial entertainments, and on the floors of the rooms in which they feasted. Pacatius says, 'The soft and luxurious thought themselves not sufficiently refined unless their extravagance changed the course of the seasons, unless winter roses floated in their cups.'

Suetonius relates that Nero spent upwards of thirty thousand pounds at one supper in the purchase of roses. This custom is supposed to have been introduced during the time of Horace:

> I tell the boy that I detest
> The grandeur of a Persian feast;
> Nor for me the linden's rind
> Shall the flowery chaplet bind:
> Then search not where the curious rose
> Beyond his season loitering grows.—Francis.

Cleopatra is said to have expended a talent in the purchase of roses for one banquet; on which occasion the floor of the apartment was covered with roses to the depth of a cubit, or one foot and a half.

The chief use of the rose at feasts was to form crowns and garlands, which were placed upon the heads and around the necks of the guests; the garlands being generally provided by the master of the house. Those who attended on the guests were also crowned, and even the drinking-bowls were wreathed with flowers. Anacreon describes a crown of roses as an invitation to festivity; they were sometimes considered as preventives of drunkenness, though a wreath of flowers was generally a well-understood mark of inebriation; as in Plautus :—

> I will place a chaplet on my head, and pretend to be drunk.

Rich unguents and oils were also prepared from the rose, which were used on the same occasions as the rose-flower itself.

Sir Thomas Browne, in his *Urn Burial*, p. 56, says, that 'in strewing their tombs the Romans affected the rose, the Greeks amaranthus and myrtle.' And in his Tract II. he says, 'The curiosity of some emperors had roses brought from Egypt; until they found the art to produce late roses in Rome, and to make them grow in winter. Nazianzen, according to Sir Thomas Browne, implies in these lines that the rose, from a natural property, has been made the symbol of silence—

> Utque *latet rosa* verna *suo putamine clausa*,
> Sic Os vinclaferat, validisque aritetur habenis,
> Indicatque suis prolixa silentia labris.

Lemnius and others have, however, traced the above to the rose being the flower of Venus, which Cupid consecrated to Harpocrates, the god of silence—wherefore it was the emblem of it—to conceal the mysteries of Venus. Hence the old English saying, 'under the rose;' implying, keep secret, or that the words spoken 'might go no further.' In rooms for convivial meetings it was once customary to place a rose above the table, to signify that anything spoken there ought never to be divulged. A rose was frequently figured on the ceilings of rooms in England and Germany.

The Skulls of Dean Swift and Stella.

(*See vol. i. of 'Doctors and Patients,' p.* 28).

In 1835, in making some alterations in the aisle of St. Patrick's Cathedral, several coffins were exposed, and amongst others, those of Swift and Stella, which lay side by side. The British Association for the Advancement of Science was then holding its meeting in Dublin, and the skulls of Swift and Stella were removed from their coffins, and were carried to most of the learned societies in that city. 'The University, where Swift had so often toiled, again beheld him, but in another place; the Cathedral which heard his preaching—the Chapter House which heard his sarcasm—the Deanery which resounded with his sparkling wit, and where he gossipped with Sheridan and Delany—the lanes and alleys which knew his charity—the squares and streets where the people shouted his name in the days of his unexampled popularity—the mansions where he was the honoured and much-sought guest—perhaps the very rooms he had often visited—were again occupied by the dust of Swift.'

Wilde's Closing Years of Dean Swift's Life.

Casts and drawings were made of the skulls; and that of Swift was carefully examined by Mr. Hamilton, of Dublin, who says:—

'On looking at Swift's skull, the first thing that struck me was the extreme lowness of the forehead, those parts which the phrenologists have marked out as the *organs of wit, causality, and comparison, being scarcely developed at all;* but the head rose gradually, and was high from benevolence backwards. The portion of the occiput assigned to the animal propensities, philo-progenitiveness, amativeness, &c., appeared excessive.

'Although the skull, phrenologically considered, might be thought deficient, yet its capacity was, in reality, very great, capable of containing such a brain as we might expect in so remarkable a genius; a section of it exceeding that of an ordinary skull in a very remarkable manner, particularly in its transverse diameter.'

Mr. Hamilton adds that 'the cranium, in its great length in

the antero-posterior diameter, its low anterior development, prominent frontal sinuses, comparative lowness at the vertex, projecting nasal bones, and large posterior projection, resembles, in a most extraordinary manner, those skulls of the so-called Celtic aborigines of North-Western Europe which are found in the early tumuli of this people throughout Ireland.'

A cast was taken of the interior of the cranium, which is of exceeding interest, inasmuch as it accurately represents the enormous development of the vessels within the cranium, resembling the cast of a recent brain much more than that of the interior of a skull.

Prior to the above date (1835) Swift's skull had been pronounced by a phrenologist to be very commonplace indeed—nay, from the low frontal development, almost that of a fool; and in the measurements of the cranium given in the 'Phrenological Journal,' we find amativeness large and wit small! with similar contradictions to the well-known character of his genius. But all these discrepancies were endeavoured to be accounted for by the fact, that the skull then presented was not that of Swift, the wit, the caustic writer, and the patriot—but that of Swift, the madman and the fool; and to explain this it has been asserted that the skull had collapsed or fallen in some places. No such change exists; and Esquirol, one of the highest authorities on the subject, has found, from long observation, that the skull previously normal, does not alter its form or capacity from long-continued insanity or imbecility. Thus, concludes Mr. Wilde, the circumstances of Dean Swift's head exhibiting small intellectual and large animal propensities—little wit and great amativeness—has not yet been accounted for by the votaries of phrenology.

Cowper's Strange Delusion in the Temple.

The poet Cowper gave early indications of his insanity. At this time he lived in the Inner Temple; and one morning, on his coming to Richard's (now Dick's) coffee-house, as it was then called, while at breakfast there, he fell into this delusion. 'I read the newspaper,' he says, 'and in it a letter, which the

farther I perused it, the more closely engaged my attention. I cannot now recollect the purport of it, but before I had finished it, it appeared demonstratively true to me that it was a libel or satire upon me. The author appeared to be acquainted with my purpose of self-destruction, and to have written that letter on purpose to secure and hasten the execution of it. My mind, probably, at this time began to be disordered; however it was, I was certainly given up to a strong delusion. I said within myself, "Your cruelty shall be gratified; you shall have your revenge!" and, flinging down the paper in a fit of strong passion, I rushed hastily out of the room, directed my way towards the fields, where I intended to find some house to die in; or, if not, determined to poison myself in a ditch, when I could meet with one sufficiently retired.'

In the next page we find Cowper still bent upon making away with himself. He writes: 'Not knowing where to poison myself, I resolved upon drowning. For this purpose I took a coach, and ordered the man to drive to Tower Wharf, intending to throw myself into the river from the Custom House Quay. I left the coach upon the Tower Wharf, intending never to return to it; but, upon coming on the quay, I found the water low, and a porter seated upon some goods there, as if on purpose to prevent me. This passage to the bottomless pit being mercifully shut against me, I returned back to the coach.'

Southey's Life of Cowper, vol. i. pp. 123, 124.

Our next extract is interesting, and relates Cowper's unhappy experience in showing that, although persons who have recovered from suspension do not commonly remember what has passed, it may be possible to recollect some sensations. The death of the Reader of the Journals of the House of Lords had opened a situation which Cowper was desirous to occupy, but for which he feared he had not sufficiently prepared himself. When the time drew near in which he was to present himself before the House of Lords, to be examined as to his competency, he became nervous and excited, and his madness came over him like a cloud. In November 1763 he went to

an apothecary's shop and bought some laudanum, with a view to put an end to his existence. This he carried about with him, and often was on the point of taking it, but his resolution as often gave way, or he was prevented by the fear of interruption. Once he thought of taking it whilst he was travelling in a coach; and once he shut himself up in his room in the Temple, and placed the laudanum by his bedside in a basin! He then got on the bed, and stretched out his hand to put the basin to his lips; but just then the key turned in the door, and his laundress's husband entered. He started up, hid the basin, and affected composure.

On the day previous to that on which Cowper was to go before the House, he resolved once more to effect his purpose; he bolted his door, and with a piece of scarlet binding attempted to hang himself. First he fixed it to some ornamental work at the corner of the bed, drawing up his feet that they might not touch the ground. The carved work gave way, and the binding with it. Then he fixed it to the tester of his bed; but the frame broke, and again let him down. The third time he fastened it to the angle of the door, using a chair to reach it, which he afterwards pushed away with his feet. Whilst he hung, he thought he heard a voice say three times, 'Tis over!' When he came to himself he heard his own groans, and experienced a feeling like that of a flash of lightning passing over his whole body. In a few seconds more he found himself on his face on the floor. He immediately jumped up, and got into bed: he had a red mark round his neck, and a broad crimson spot showed the stagnation of the blood under one eye. Soon after he got into bed, he heard a noise in the dining-room, where the laundress was lighting a fire. She must have passed the door, which was open, whilst he was hanging, but did not perceive him. Presently, however, she came, having heard his fall, and supposing that he was in a fit. 'I sent her,' says Cowper, describing the scene, 'to a friend, to whom I related the whole affair, and despatched him to my kinsman at his coffee-house. As soon as the latter arrived, I pointed to the broken garter, which lay in the middle of the room; I apprised him also of the attempts I had been making.

His words were, "My dear Mr. Cowper, you terrify me! To be sure you cannot hold the office at this rate—where is the dissertation?" I gave him the key of the drawer where it was deposited, and, his business requiring his immediate attendance, he took it away with him; and thus ended all my connection with the Parliament office.'

Southey's Cowper, i. 130.

It was while he was a boy at Westminster School that, late one evening, Cowper received the second of his serious impressions, which gave a colour and character to all his after-life. 'Crossing St. Margaret's churchyard,' says his biographer, Southey, 'a glimmering light in the midst of it excited his curiosity, and instead of quickening his speed, and whistling to keep his courage up the while, he went to see from whence it proceeded. A gravedigger was at work there by lantern-light, and just as Cowper came to the spot he threw up a skull, which struck him on the leg. This gave an alarm to his conscience, and he remembered the incident as amongst the best religious impressions which he ever had.

John Hunter's Residence at Kensington.

(*'Doctors and Patients,' vol. i. p.* 232).

This pre-eminent anatomist and surgeon had a country residence at Earl's Court, of which we read in Foot's 'Life of Hunter' (1794):—

'John Hunter chose a cottage at Earl's Court, about a mile, in the midst of fields, beyond Brompton. There he sometimes retreated for fresh air and took his hobby-horse along with him. Nobody of common curiosity could have passed this original cottage without being obliged to enquire to whom it belonged. By observing the back of the house a lawn was found stocked with fowls and animals of the strangest selection in nature, and in the front there were to be seen four figures in lead or stone representing lions, two in a form *passant* placed upon the parapet, and on the ground two more *couchant*, guarding the double flight of steps leading to the vestibule. On the sides of

the area were seen two pyramidal collections of shells, each of them seeming to conceal a subterraneous entrance to a Golgotha. Over the front door was presented the mouth of a crocodile gaping tremendously wide. It was also at Earl's Court that he pastured those buffaloes which he, so lately as in 1792, put into harness and trotted through the streets of London. Savage beasts, said to have been snared on the lofty and barbarous mountains of Thibet, or on the dreary wilds of Boutan, and imported here for autumnal exhibition on carnival days at Smithfield, held in honour of St. Bartholomew, were sure to be first shown to John Hunter, their keeper thus enhancing the estimation of his rare Asiatic curiosities. We are also told that giants and dwarfs were certainly retained by him for dissection whenever the fates should determine it—whenever the Sister's shears of destiny should cut the threads from which their lives were suspended.'

Last summer Mr. John J. Merriman, of Kensington, by permission of the occupier, Dr. Robert Gardiner Hill, invited Mr. Frank Buckland to examine this interesting place, and he has written a description of it as he found it :—

'John Hunter built this house himself. It was originally a plain brick building, in the form of a square; but as his practice increased he added to it on both sides. It is just the sort of house the great anatomist would have built. There is not the slightest attempt at effect or useless ornamentation. His favourite room was evidently the large room on the ground floor, looking out on the park. In this room there is plenty of space for his papers, books, and all the paraphernalia of a working physiologist. Mrs. Hunter's rooms were evidently upstairs, and the panels of the doors are ornamented with water-colour drawings. All round the house is a covered cloister dug about six feet into the earth. I expect John Hunter had two reasons for making this cloister. First, it would keep the house dry; and secondly, it would form a grand place for keeping live stock. It would also be a good place to hang up skeletons or dry preparations, or to macerate bones.

'The entrance into these cloisters leads through a dark subterraneous passage, like an enlarged fox's-earth. This passage

was doubtless one of Master John's contrivances, for through his burrow he could wheel a truck, or drag anything into his den. The entrance to where the stables originally stood was not far from this burrow, and John could have easily whipped anything into the stable-yard down his fox's-earth, and into the area, without Mrs. Hunter knowing anything about it; and I'll be bound to say she used occasionally to "lead him a life," if any preparation with an extra effluvium about it was left on the dissecting-table,[1] when the great surgeon was obliged to go out on his professional duties.

'At one end of his burrow there is a mysterious-looking door, which leads into a small room, now used as a general receptacle for rubbish. In a corner of this room there is a copper boiler standing out of the wall. Two doors fit on the top of this boiler, which closes it up quite tight. Ah, if this old boiler could only tell what it had boiled! *One* giant, we know, was boiled up in it; for in 1787 John Hunter wrote as follows to Sir Joseph Banks:—"I have lately got a *tall man*. I hope to be able to show him to you next summer." This tall man was no doubt O'Brien, the Irish giant, whose skeleton is now in the Hunterian Museum at the College of Surgeons. I opened the cover of the boiler and felt about for any relics of the great John's culinary operations that may still be left. I could not, however, discover anything except a very old rusty key covered up with dust at the bottom of the copper. Whether this was O'Brien's key I don't know, at all events it is an interesting relic. Close to the boiler are the old (now tumble-down) pig-sties, wherein it was doubtless that Hunter kept the little pigs which he fed with madder to cause their bones to become red.

'After Merriman and myself had examined the house, we went into the field in front of John Hunter's sitting-room. In the middle of the field there is a hollow. This was formerly a pond, in which John Hunter tried experiments to force Scotch river mussels to form pearls after the manner of the Chinese experiment.

[1] This dissecting-table is now in the museum of St. George's Hospital. The sofa on which Hunter died is, I understand, also at St. George's.

'In the pathway near the house I observed a tree bearing very peculiar incision marks upon its bark, which I think were also some of John Hunter's handiwork, inflicted on it when he was carrying out experiments on vegetable life. The markings were mostly above my head, but this might be accounted for by the fact that when John Hunter cut the poor tree about, they would be about the level of the experimenter's head; but the growth of the tree would of course carry the markings up many feet higher.

'In one portion of the ground is a very old mulberry tree. John Hunter says: "I made experiments on several trees of different kinds, as pines, yews, poplars, walnuts." He does not, however, mention this old mulberry tree; but I'll be bound the poor old tree did not escape having holes bored into him by gimlets to take his temperature or freeze his sap in the spring months. Oh that the mulberry tree could tell us of the suffering of his fellow-trees in the grounds years ago at the hands of John Hunter!

'Close to the mulberry tree, at one corner of the field, is an artificial mound of earth very much the shape of an ancient tumulus. Its western side has a passage in it leading to three vaults, now called the "Lion's Den," and wherein John Hunter probably used to keep his lions and leopards.

'His sitting-room windows face this den, so that he could watch the animals from his easy chair. This is surely the den from which his leopards escaped, the incident of which is thus recorded:—Two leopards broke from their confinement, and got into the yard with the dogs; a fierce encounter immediately commenced, the noise of which alarmed the neighbourhood, and quickly brought out Hunter to inquire into its cause. He found one of the leopards engaged with the dogs, whilst the other was making his escape over the wall; and instantly, though quite unarmed, he ran up and laid hold of both the animals, which fortunately submitted to be led back to their den and secured. When the danger was over, however, he became so agitated at the recollection of it that he fainted.

'I examined these dens, but discovered nothing but a very old decrepit wheelbarrow, which from the look of it might

have been used by John Hunter. In the largest den, however, I found a post and an iron chain, such as is used for tying up cattle. The block of wood at the end of this chain is very old and worm-eaten, the chain also was very much worn. I think there can hardly be a doubt that this was the post to which John Hunter used to tie up the little bull which the Queen gave him, and which little bull nearly killed the great John; for the story goes that one day when wrestling with the bull the beast knocked him down, and would have gored him severely had not one of the servants driven the animal off with a stick.

'On the top of the "Lion's Den" there is a little rampart made of bricks and tiles, after the fashion of a castellated tower. The legend is that John Hunter kept a gun here, which he used to fire off occasionally—a sort of private fortress, in fact; gun or no gun there is an excellent look-out from the top of the "Lion's Den." In John Hunter's time Earl's Court was quite in the country, and from the "Lion's Den" he would have had a good view of Westminster Abbey, little thinking he would ever be buried there.

'I have thus endeavoured to describe Earl's Court, the residence of the illustrious John Hunter. During my visit there I almost imagined that I was in the presence of the great man himself, so little is the place changed.'

(*Quoted in 'Long Ago,' No. I., January 1873*).

Olden Secrets in Physic and Surgery.

They lie before us in a venerable volume, whose grave frontispiece is adorned with the portraitures of Alexis, Albertus Magnus, Dr. Reade, Raymond Lully, Dr. Harvey, Lord Bacon, and Dr. John Weckir. John Weckir, Doctor in Physic, first compiled the book, and Dr. R. Reade augmented and enlarged it. 'A like work never before was in the English tongue.' It was printed in the year 1661, for Simon Miller, at the Starre in St. Paul's Church Yard, and it is entitled, 'Eighteen Books of the Secrets of Art and Nature, being the Summe and Substance of Naturall Philosophy, Methodically Digested.' The

book is one of considerable size and pretension, written by wise doctors in the good old time, two hundred years ago. Let us not be conceited and harp only on the strings provided to our fingers in the nineteenth century. For a few minutes, at least, it will not do us harm to get a little scientific information from our ancestors. We shall glean, therefore, some random facts out of the harvest-field of Doctors Reade and Weckir, selecting, of course, as most characteristic, those which our forefathers may call exclusively their own.

In the way of practice of medicine, we moderns say that anything like scientific principles, on which one can depend, have only been attained in our own lifetime. 'Doctors differed,' and bumped against each other, only because all alike were feeling through the dark. In our own day there is light enough to keep doctors from differing very grossly—gross difference springing generally more from the want of knowledge in an individual than in the profession generally, although there is yet a vast deal to be learnt. In the first century, Asclepiades dubbed the medical system of Hippocrates, 'a cold meditation of death.' Under Nero there arose a Dr. Thessalus, who taught that Nature was the guide to follow and obey in all diseases; and, therefore, under his system patients were simply to be liberally and rapidly supplied with everything they fancied. Paracelsus, in the sixteenth century, looked for a patient's symptoms in the stars; so we must not be surprised if the 'Secrets in Physic and Surgery,' published among the other secrets in this volume now before us, contain odd information.

There are many remedies against the Plague; but that one which is recommended as '*The Best Thing against the Plague*,' is for a man to wash his mouth with vinegar and water before he goes out, drinking also a spoonful of the liquor; then to press his nose and stop his breath, so that 'by the vapour and steam held in your mouth, the brain be moistened.' In the following prescription we believe entirely: '*For Melancholy.* It is no small remedy to cure melancholy, to rub your body all over with nettles.'

Book Five contains secrets for beautifying the human body. The following receipt, which comes first, for giving people a

substantial look, seems to be somewhat too efficacious to be often tried: '*To make men fat.* If you mingle with the fat of a lizard, saltpetre and cummin and wheat-meal, hens fatted with this meat will be so fat, that men that eat them will eat until they burst.'

For the hair-dyes favoured by our forefathers we cannot, however, say much, for we must differ in taste very decidedly. Recipes are given for obtaining, not only black, but white hair, yellow hair, red hair, and 'To make your hair seem GREEN.' Nobody in these days will use a course of the distilled water of capers to make his hair look like a meadow; and even, if anybody among us, too fastidious as we now are, wanted yellow hair, we do *not* think that he would consent to rub into his head for that purpose honey and the yolk of eggs. Among 'secrets for beautifying the body,' we cannot but think this also indicative of an odd taste: 'If you would change the colour of children's eyes, you shall do it thus: with the ashes of the small nut-shells, with oil you must anoint the forepart of their head; *it will make the whites of children's eyes black;* DO IT OFTEN!'

Household Words.

RARE OPERATIONS.

Exostosis in the Eye.

Dr. Maisonneuve, at the French Academy of Sciences, has given an account of the extirpation of an enormous exostosis in the orbit or socket of the eye. An exostosis in this part causes the organ of vision to protrude, and moreover produces a compression on the brain which may in time occasion death. The destruction of these osseous tumours has been rarely attempted by surgeons, and then only partially, for fear of breaking the bone which forms their base. They are so hard that the best-tempered steel is employed in vain upon their tissue. Thus, in one case on record, the surgeons worked five hours with gouge and mallet, and only succeeded in carrying off one-third of the tumour. In the case reported by Dr. Maisonneuve, he resolutely attacked the base of the tumour, detached it in a few seconds by breaking the bone on which it rested, and then, by

slow degrees, extracted it in a single block. It weighed 90 grammes, its vertical diameter was 52 millimetres, its antero-posterior diameter 62, and the transversal one 40. Its base presented a surface of four square centimetres. Its tissue was much harder than that of ivory. Immediately after the operation the eye was carefully replaced in its orbit, and at present, six weeks after the operation, the subject, a young man of 19, has completely recovered both his health and eyesight.

Quadruple Amputation.

Our readers may remember that in the autumn of 1869 Dr. Begg, of Dundee, amputated the whole of the extremities in the case of a young woman named Robertson, whose hands and feet had assumed a gangrenous condition, the proximate cause of which was attributed to embolism. After the operation a subscription was raised, and the poor woman sent to London, where, at the request of some influential friends of hers, Mr. Heather Bigg had constructed for her some specially-devised prothetic appliances, in which the distinguishing features were that the artificial hands were automatic in action, opening and shutting their fingers at the will of the patient. This peculiar prehensility gave her the power of grasping even so small a substance as a crochet-needle, and enabled her to gain a comparatively lucrative livelihood by making shawls, &c. So admirably did she do this that one was sent by her to the Queen, who, struck by the excellence of the workmanship and the remarkable means by which it was accomplished, generously gave the poor woman 5*l.* The artificial legs were also so arranged as to enable her to stand and walk with the aid of crutches. Three years have passed since she first began the use of extraneous appliances, and she now writes an admirable hand, besides knitting, feeding, and dressing herself, &c. In a communication made by her a few days since, which is now before us, she writes that she can walk alone quite easily with the aid of crutches, and that no one could observe the cause of her lameness. The case is one of no common interest, owing to its being the only one on record in which the whole of the

four extremities have been removed. Apart from its pathological value, as indicating how life may be saved by judicious interference in cases of embolic gangrene, there remains the gratifying result that, by the use of ingenious mechanism, the patient is enabled to gain her living, while presenting nearly the same external appearance as if she still retained possession of her natural limbs. It is a unique case, and a triumphant instance of mechanical ingenuity.

British Medical Journal.

For a Pinne-and-Webbe in the Eye.

'This,' says Bailey, was 'a hairy induration of the membranes of the eye, not much unlike a cataract,' and Pearl (among oculists) 'a web on the eye.' Or, 'any humour that comes out of the head.' John Aubrey records: 'My father laboured under this infirmitie and our learned men of Salisbury could doe him no good. At last one goodwife Holly, a poore woman of Chalke, cured him in a little time. My father gave her a broadpiece of gold for the receipt, which is this: Take about half a pint of the best white wine vinegar; put it in a pewter dish, which set on a chafing dish of coales, covered with another pewter dish; ever and anon wipe off the droppes on the upper dish, till you have got a little glassful, which reserve in a cleane vessell; then take about half an ounce of white sugar candie, beaten and searchte very fine, and putt it in the glasse; so stoppe it and let it stand. Drop one drop in the morning and evening into the eye, and let the patient lye still a quarter of an hour after it.

'I told Mr. Robert Boyle this receipt, and he did much admire it, and tooke a copie of it, and sayd that he that was the inventor of it was a good chymist. If this medicine were donne in a golden dish or porcelain dish, &c., it would not doe this cure; but the virtue proceeds, sayd he, from the pewter, which the vinegar does take off.'

Aubrey's Natural History of Wiltshire.

Tight Boots and Weak Eyes.

There is something after all in the notion and belief of our old lady friends, that tight boots produce weak eyes. Since the new-fashioned boot made for and worn by ladies has come into use, we have been consulted in various instances for a weakness of vision and a stiffness about the ocular apparatus, which we found at first difficulty in accounting for, since we were unable to detect any abnormal condition of the eye to cause this disordered vision, or to trace any constitutional disturbance likely to provoke functional phenomena. A mother, wise in her generation, given to bestowing roses to Harpocrates, the god of Silence, asked us if the tight boots worn by her daughter might not produce the distressing symptoms of *asthenopia* complained of. To this we assented, and upon the tight boots being dispensed with, discovered that the cause of the mischief must have been removed, for the injurious effect upon the eyes ceased—*sublatur causa, tollitur effectus.* However disposed our fashionable ladies may be to wear the high-built, conical-shaped heeled boot of the period, with narrow toes and light top soles, which throws the foot so prominently forward, and tends to compress it in a space which the boot-closer narrowly limits, and however anxious they may be to imitate the Lady Hester Stanhope, whose foot, it is stated, betrayed a royal race, for water flowed beneath the instep, this we tell them, in the hour of splendour and fashion, that the localised pain suffered from compression of the foot, and the consequent production of corns and bunions and distorted toes, so patiently endured in the self-sacrifice to outward show, are nothing compared to other symptoms which undue and persistent pressure provokes, and which may be readily recognised in the unsteady bashful look about the eyes, the perpetual winking of the lids, and the contracted brow, so pathogomic of approaching weakness of sight—the asthenopia of the oculist; while we must remind them Propertius has written *oculi sunt in amore duces*, and we now teach them that, at the expense of a neat foot, they must not injure their eyesight.

Medical Press.

'DOCTORS' BILLS.'

One of the *Meditations* of the Hon. Robert Boyle is 'Upon his reviewing and ranking together the several bills piled up in the Apothecary's shop,' and runs as follows: 'Either my curiosity, or my value of health, has made it my custom when I have passed through a course of physic, to review the particulars it consisted of; that, taking notice by what remedies I found most good, and by what, little or none; if I should fall into the like distemper for the future, I might derive some advantage from my past experience. In compliance with this custom, as I was this day reviewing and putting together the doctor's several prescriptions sent me back by the apothecary, Good God! said I, in my self, what a multitude of unpleasant medicines have I been ordered to take. The very numbering and reading them were able to discompose me, and make me almost sicke, though the taking of them helped to make me well. And certainly, if when I was about to enter into a course of physick, all these loathsome medicines, and uneasie prescriptions, had been presented me together, as things I must take and comply with, I should have utterly despaired of a recovery that must be so obtained, and should not perhaps have undertaken so difficult and tedious a work, out of an apprehension that it would prove impossible for me to go thorow with it. Thus, when a man considers the duties, and the mortifications, that are requisite to a recovery out of a state of sin, into state of grace, he must be resolute enough, if he be not deterred from undertaking the conditions that piety requires, by so many and great difficulties as will present themselves to his affrighted imagination: but let not this make him despondent, for 'tis true, that these discomposing medicines, if I must have taken so much as a tenth part of them in one day, would have either dispatched me, or disabled me to endure the taking any the next. But then, although I now see these troublesome prescriptions all at once, I did not use them so, but took only one or two harsh remedies in one day, and thereby was enabled to bear them, especially being assisted by moderate intervalles of respite, and supported by other seasonable cordials, and by

that highest cordial, the hope that the *use* of these troublesome means of recovery would soon free me from the *need* of them. And thus, though the hardships of piety are, by the ghostly and carnal enemies of it, wont to be represented to one that begins to grow a convert, so great and formidable a multitude as to be insuperable; yet if he consider, that although his foresight meet with them, all at once, yet he will need to grapple with them, but one after another, and may be as well able to overcome a temptation this day or to-morrow, as he did another yesterday. So that to this case also may in some sense be applied, that (either counsel or precept) of our Saviour, not to be sollicitous for to-morrow, but to charge no more upon a day than the trouble that belongs to it. And if he considers too, that as a wise physician has always a great care that his remedies be not disproportionate to the patient's strength, and after harsh physick to relieve him with cordials, so God will not suffer those that intrust themselves to Him to be tempted above what they are able, but will allow them cordials after their sufferings, in case he do not turn the sufferings into cordials. If (I say) our new convert shall consider things of this nature, he will not be much discouraged by the appearance of difficulties, that will as much ennoble and endear his success as they can oppose it; and he will never despair of victory in an engagement, where he may justly hope to have God for his second, and Heaven for his reward.'

A Reverie.

When I walk the streets (says Bishop Berkeley), I use the following natural maxim (viz. that he is the true possessor of a thing who enjoys it, and not he that owns it, without the enjoyment of it), to convince myself that I have a property in the gay part of all the gilt chariots that I meet, which I regard as amusements designed to delight my eyes, and the imagination of those kind people who sit in them gaily attired only to please me, I have a real and they only an imaginary pleasure from their exterior embellishments. Upon the same principle, I have discovered that I am the natural proprietor of all the

diamond necklaces, the crosses, stars, brocades, and embroidered clothes, which I see at a play or birth-night, as giving more natural delight to the spectator than to those that wear them. And I look upon the beaux and ladies as so many paroquets in an aviary, or tulips in a garden, designed purely for my diversion. A gallery of pictures, a cabinet, or library, that I have free access to, I think my own. In a word, all that I desire is the use of things, let who will have the keeping of them. By which maxim I am grown one of the richest men in Great Britain, with this difference, that I am not a prey to my own cares, or the envy of others.

The Seven Ages of Man.

In the 'Customs of London and Arnold's Chronicle,' printed by Pynson, 'the seven ages of man lyving in ye worlde,' are thus described: 'The fyrst age is Infancie, and lastyth from the byrth unto seven yere of age. The second is chyldhod and enduryth unto fifteen yere age. The third age is adolescencye and enduryth unto twenty-five yere age. The fifth age is manhood. The sixth is old age and lasteth unto seventy yere age. The seventh age of a man is crepyll and enduryth unto dethe.'

In 'The Treasury of Ancient and Modern Times,' 1613, Proclus, a Greek author, is said to have divided the lifetime of man into *Seven Ages;* over each of which one of the seven planets was supposed to rule:—'The *first age* is called *Infancy*, containing the space of foure yeares. The *second age* containeth ten years, until he attaine to the yeares of fourteene: this age is called *Childhood.* The *third age* consisteth of eight yeares, being named by our ancients *Adolescence* or *Youthhood;* and it lasteth from fourteene, till two and twenty yeares be fully complete. The *fourth age* paceth on, till a man have accomplished two and fortie yeares, and is tearmed *Young Manhood.* The *fifth age* named *Mature Manhood*, hath (according to the said author) fifteene yeares of continuance, and therefore makes his progress so far as six and fifty yeares. Afterwards, in adding twelve to fifty-sixe, you shall make up sixty-eight yeares, which

that highest cordial, the hope that the *use* of these troublesome means of recovery would soon free me from the *need* of them. And thus, though the hardships of piety are, by the ghostly and carnal enemies of it, wont to be represented to one that begins to grow a convert, so great and formidable a multitude as to be insuperable; yet if he consider, that although his foresight meet with them, all at once, yet he will need to grapple with them, but one after another, and may be as well able to overcome a temptation this day or to-morrow, as he did another yesterday. So that to this case also may in some sense be applied, that (either counsel or precept) of our Saviour, not to be sollicitous for to-morrow, but to charge no more upon a day than the trouble that belongs to it. And if he considers too, that as a wise physician has always a great care that his remedies be not disproportionate to the patient's strength, and after harsh physick to relieve him with cordials, so God will not suffer those that intrust themselves to Him to be tempted above what they are able, but will allow them cordials after their sufferings, in case he do not turn the sufferings into cordials. If (I say) our new convert shall consider things of this nature, he will not be much discouraged by the appearance of difficulties, that will as much ennoble and endear his success as they can oppose it; and he will never despair of victory in an engagement, where he may justly hope to have God for his second, and Heaven for his reward.'

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His cotton is of dark dervied grene,
  His matter all within his nose is pend,
And in the strangest guise it may be seene,
  He drawes his milk out of a candel's end,
Here with his missives round about he sendes,
  Till breath and beard and all the house do stink;
He wrings his neck and giveth to his freiendes,
  Hold galantes here, and to Galenus drink.'

Notes and Queries, No. 254.

Epitaphs on Fat Folks.

In the year 1755, died the great tallow-chandler whose life and death are thus laconically recorded on his tombstone :—

Here lies in earth an honest fellow,
Who died by fat, and lived by tallow.

Another corpulent person is thus lamented :—

Here lies the body of Thomas Dollman,
A vastly *fat*, though not a very tall man;
Full twenty stone he weighed, yet I am told,
His captain thought him worth his weight in gold:
Grim Death, who ne'er to nobody shows favour,
Hurried him off for all his good behaviour,
Regardless of his weight he bundled him away,
'Fore any one 'Jack Robinson' could say.

A moral lesson is given in the following :—

But why he grew so fat i' th' waist,
  Now mark ye the true reason,
When other people used to fast,
  He feasted in that season.
So now, alas! hath cruel Death
Laid him in his sepulchre.
  . . . . .
Therefore, good people, here 'tis seen,
  You plainly may see here,
That fat men sooner die than lean,
  Witness fat Johnny Holder.

The son of a Dean, a man of very spare habit, expressing to the son of a Bishop his astonishment at the great difference in

the size of their fathers, the Bishop being very fat, he explained the reason as follows:—

There 's a difference between
A Bishop and a Dean;
And I 'll tell you the reason why:
A Dean cannot dish up
A dinner like a Bishop,
To feed such a fat son as I.

The Hindoo Notion of Longevity.

On this, as on every subject, the imagination of the Hindoos distanced all competition. Thus, among an immense number of similar facts, we find it recorded that in ancient times the duration of the life of common men was 80,000 years, and that holy men lived to be upwards of 100,000. Some died a little sooner, others a little later; but in the most flourishing period of antiquity, if we take all classes together, 100,000 years was the average. Of one king, whose name was Gudhishther, it is casually mentioned that he reigned 27,000 years; while another, called Alarka, reigned 66,000. They were cut off in their prime, since there are several instances of the early poets living to be about half a million. But the most remarkable case is that of a very shining character in Indian history, who united in his single person the functions of a king and a saint. This eminent man lived in a pure and virtuous age, and his days were indeed long in the land, since, when he was made king he was 2,000,000 years old: he then reigned 4,300,000 years; having done which he resigned his empire, and lingered on for 100,000 years more.

Buckle's History of Civilisation.

Longevity of Medical Men.

The following eminent physicians and surgeons died during the year 1871 at the ages indicated, viz.:—Joseph Hodgson, F.R.S., late president of the Royal College of Surgeons of England, aged 81; James Wardrop, M.D., F.R.C.S., formerly surgeon to King George the Fourth, 87; Peter Mark Roget,

M.D. Edinburgh, F.R.C.P., F.R.S., 90; John Haddy James, F.R.C.S., late surgeon to the Devon and Exeter Hospital, 88; Joseph C. Cookworthy, M.D. Edinburgh, of Plymouth, 79; Gilbert Wakefield Macmurdo, F.R.C.S., F.R.S., surgeon to St. Thomas's Hospital, and surgeon in ordinary to Newgate, 72; Sir James Prior, M.D., deputy inspector of hospitals, 80; James Haviland, F.R.C.S., of Bridgwater, 81; William Stevens, M.D., D.C.L., Oxon, of Great Malvern, 82; Nathaniel Smith, F.R.C.S., of Clifton, 88; and William Clark, M.D., Cantab., F.R.S., late professor of anatomy in the University of Cambridge.

The obituary of 'The Times' and the medical journals (of 1872) have recorded some remarkable illustrations of prolonged existence in members of the medical and surgical professions, who have died in the above year. It will be seen in the subjoined list that only those who had reached fourscore years and upwards are published—as Hugh Andrew, M.D., and Peter Miller, M.D., each 94 years of age; Bowyer Vaux, F.R.C.S., 91; Augustus Bozzi Granville, M.D., and Francis Kiernan, M.R.C.S., each 89; Robert Venables, M.D., 88; Robert Buchanan, M.D., 86; Thomas Leigh Blundell, M.D., 84; William Bodington, F.R.C.S., and John Gardner, F.R.C.S., each 82; Thomas Coleman, F.R.C.S., 81; Robert Wade, F.R.C.S., Thomas Barnes, M.D., and James Alexander Gordon, M.D., each 80 years of age. The united ages of these 14 gentlemen amount to 1,200 years, giving an average of more than 85 years to each. Dr. Casper, of Berlin, in his work on the duration of human life, has placed medical men as representing a medium longevity of 56. Artists are represented at 57; lawyers, 58; military men, 59; farmers and clerks, 61; merchants, 62; and clergymen, 65. To prolong life the same authority adds that good temper and hilarity are necessary; violent passions, the inward gnawings of offended vanity and pride, tending to corrode every viscus, and to lay the seeds of future mental and bodily sufferings. Apathy and insensibility being, unfortunately, the best sources of peace of mind, and as, as Fontenelle observed, 'a good stomach and a bad heart are essential to happiness,' perhaps the best maxim to prolong our days and render them as tolerable as possible is the '*Bene vivere et lætari.*'

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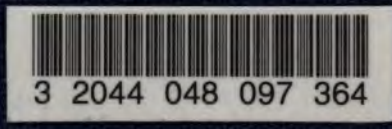
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